RAILWAY AGE

JULY 3, 1948

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WEEK AT A GLANCE

offsetting high labor costs: Recent wage increases—with more to come—lend growing emphasis all the time to the importance of maintenance-of-way techniques that economize on labor, either through the use of machines that replace men or through investment in more durable structures that require less annual upkeep. The Delaware & Hudson's chief engineer, P. O. Ferris, discusses this trend in the impressive array of facts and observations forming the illustrated article on page 24.

GETTING PULLMAN MEN TOGETHER: What Pullman's annual service conferences are accomplishing in the way of better service and a friendlier attitude of employees toward travelers is reported in the article on page 34 herein. While the detailed program varies from year to year, the fundamental purposes remain the same; namely, to assure the employee he is considered by the company as a person who can contribute opinions and ideas valuable to the organization, to impress on the employee the importance to himself and to the organization of his individual effort to give better service, to present management's problems and objectives in a way the employee will appreciate, and to emphasize to the employee the human factor in management's contribution to the organization's efficient operation.

GAS-TURBINE PROGRESS: William B. Tucker of Allis-Chalmers described at the recent A.S.M.E. meeting at Milwaukee that company's development of its gas-turbine power plant unit for locomotives. Consisting of the turbine itself, a regenerator, axial-flow compressor, reduction gear, and two double electric generators, the unit is adapted to operation on either fuel oil or pulverized coal. The article on page 29 is based on that talk.

NO BILL: With strange but becoming meekness the Department of Justice's lawyers confess they have no case to back up the horrendous allegations of illegal monopolistic conniving by railway car builders with which their impulsive superiors rushed into print last year. Our news pages report this development, and the grand jury's discharge, but the department seems to have been oddly silent as to how many thousands of dollars of the taxpayers' money it wasted in this irresponsible behavior.

EMPHASIS ON MOVEMENT: One way to enlarge the capacity of a classification yard is to spread it over a bigger portion of the landscape. At Cumberland the B.&O. had no practical way to do this, but it could, and did, increase that yard's ability to handle cars. Rearrangement of tracks, changes in grades, and particularly the installation of retarders, loud-speakers, floodlights, teletypes and radio, all have played a part in speeding up switching and getting trains ready for departure. The effect of these improvements reaches beyond Cumberland, too, because work formerly performed elsewhere has been transferred there

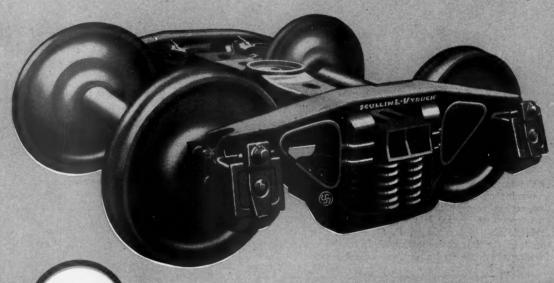
to obtain the fullest advantage of the half-million dollar investment. A full account of the added facilities and modified operating practices appears in the illustrated article on page 16.

RAILWAY LABOR LAW REFORM: When anyone comes along with the suggestion that the Railway Labor Act needs amendment to make it possible for the public to protect itself against a complete cessation of railroad service, the brotherhoods' spokesmen begin to shout about involuntary servitude and compulsory arbitration-to talk loudly about their "rights" while keeping mum about their responsibilities. The public has some rights, too. Our leading editorial argues that neither the unions nor the employers should be able legally to bring all the nation's railroads to a standstill just because the award of a neutral emergency board or other mediatory agency, based on a thorough and impartial analysis of each party's case in a dispute, happens not to be palatable. The public got tired of nationwide strikes in some other industries, and it found a way to make the machinery for adjudicating management-labor disputes work in those industries, i.e., the Taft-Hartley Act's provision for injunctions against strikes (or lockouts). It is up to Congress to establish means for preserving peace in the railroad industry, to equalize the risk (now all in one direction) assumed by the parties to a dispute in going to extremes—that is, stopping the trains —to win more than independent observers find them fairly entitled to.

DIESELS OR ELECTRICS?: If a railroad finds itself faced with conditions under which wholesale replacement of steam locomotives appears desirable, a choice is available—electrification or Diesel-electrification. The factors to be considered in arriving at the best answer for a given set of conditions are summed up this week (page 21) by P. H. Hatch of the New Haven.

NEEDS TOTAL \$3 BILLION: American railroads have plans to spend more than \$3 billion for postwar improvements, according to P. Harvey Middleton of the Railway Business Association, whose 22-page report of this potential contribution to the nation's business is summarized in our news columns. The report is a result of a survey of the plans of 33 Class I roads, and it leaves no doubt that expenditures of this magnitude will be possible only if the Interstate Commerce Commission will do its part in authorizing rates sufficient to produce revenues that will nourish the railroads' credit and encourage their expansion.

TURBINE-ELECTRIC ON C. & O.: A report appears in the news columns of a very unusual Interstate Commerce Commission proceeding, in which a protesting C.&O. stockholder appeared in a public hearing to challenge that company's proposals for equipment financing. Officers of the C.&O. and of Baldwin discussed at some length the performance to date of the steam turbine-electric locomotives now being groomed on that road for high-speed passenger service.



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THE RAILWAY LABOR ACT SHOULD BE OVERHAULED

The vice-president and general counsel of the Association of American Railroads, J. Carter Fort, recommended some important changes in the Railway Labor Act to a joint congressional committee a couple of weeks ago (Railway Age, June 19, page 52). His suggestions merit serious consideration and wide discussion, not only by that committee but within the railroad industry and by the shipping community, because there can be no doubt that the Railway Labor Act has "broken down"-in that its processes no longer assure industrial peace on the railroads.

Emergency Relief

AGE

For the past five or six years nationwide railway strikes would have occurred at least once a year except for intervention by the President. The presidency of the United States has too many duties attached to it already, without adding to its mankilling responsibilities the chore of preventing industrial strife on the railroads. Surely, in this age of specialization, here is a judico-administrative job which can be entrusted to some agency other than the nation's chief magistracy. On this question, at least, there should be no disagreement among the interested parties—unions, employers, or customers.

Mr. Fort recommends, when a "state of emergency" exists, either because there is a war going

on or because such a "state of emergency" is found to exist by Congress or the President by reason of a threatened cessation of railroad service, that injunctive relief forbidding strikes or lockouts be made available, wherever such strikes or lockouts are occasioned by failure of one of the parties to a dispute to abide by an "emergency board" decision.

Some of the union people would, doubtless, consider this proposal to be one of "compulsory arbitration" and "outlawing strikes." Actually, it would not necessarily be that at all. The parties would still have all the facilities they now have for settling their disputes by negotiation or voluntary arbitration. Unless the strike or lockout should involve more than one railroad, it is doubtful that, unless a war were in progress, a "state of emergency" sufficient to jeopardize the national interest would be proclaimed. Of course, if an industrial dispute were permitted to be settled, even on a single railroad, by the gage of a strike or lockout, then neither contestant ought to be artificially helped or handicapped in the struggle. Specifically, the hindrances against the employment and transportation of strikebreakers should be removed and injunctions should be obtainable to assure that all picketing would be peaceful.

If simultaneous and collusive strikes or lockouts on more than one railroad, in protest against "emergency board" decisions, could be halted by injunc-

tion-while one-railroad strikes or lockouts were countenanced-the "right to strike" would not be sacrificed, but national peril from strikes would be largely eliminated. And if no artificial handicaps, except that of refraining from illegal violence, were placed in the way of either party in the conduct of a single-railroad strike or lockout after "emergency board" procedure had been used, such disputes as might result in actual work stoppage would seldom be of great duration. Giving one of the parties a lot of help in strikes and handicapping the other party—as is done by the law as it now stands -encourages industrial strife by absolving one of the parties from risk. If equal risks were restored, neither party would care to assume them unless its sense of grievance were intolerable.

Since there are no generally accepted standards of what constitutes justice in industrial disputes (as there are in ordinary court cases), there are strong reasons for refraining to require either contending party to obey an "emergency board" without any recourse whatsoever. It is not necessary to tolerate industrial warfare on a nationwide scale in order to preserve to disputants who feel deeply aggrieved the opportunity to "fight it out," if they care to assume the risk—and involving only one railroad at a time, so inconvenience to the public would be minimized.

Certainly any legislation supposedly designed to promote friendly negotiation of labor disputes but which, on the contrary, incites disputes and litigation can only be adjudged a complete failure—and this is undeniably true of the amendment to the 1934 Railway Labor Act which established the National Railroad Adjustment Board. This board defies all precedent and successful example in the establishment of either courts or administrative agencies. When, after 14 years of operation, an agency cannot do any better in keeping pace with its docket than Division I of this board has been able to do, then no conclusion is possible except that the whole concept of organization of the board is fundamentally in error.

Ways to Break the Log Jam

If the board is to be continued, provision should be made (1) for the keeping of formal public records such as those of other courts and administrative agencies; (2) for appeal to the courts by parties dissatisfied with decisions; (3) for an express provision that members and referees, in deciding cases, must apply agreements and practices from the railroad where the dispute arises and not from those of some other railroad which has different agreements and practices; and (4) for the naming of permanent referees so they can acquire the skill and knowledge enabling them to deal sensibly with the cases they must decide. If these changes were made, understandable and acceptable

precedents would soon emerge and litigation wouldnot be instituted except in cases where known and accepted precedents would afford reasonable assurance of victory.

The Republican party has been in control of Congress for the better part of two years without having done anything whatever to improve labor relations on the railroads. There has been a strike threat hanging over the industry for almost two months, but it is President Truman—not the Republican Congress—whom the nation must thank for forestalling this disaster. It is time that these cautious and vote-conscious legislators were called upon to do their duty. The amendments to the Railway Labor Act suggested in the foregoing are the very minimum needed to put the machinery for orderly settlement of railway labor disputes on a par with the set-up provided for the adjudication of disputes in other industry.

WHEN ESTIMATES AND ACTUALITIES DON'T AGREE

Recently a railroad carried out an improvement project involving the expenditure of a large sum of money. The purpose was to produce economies and other benefits through more efficient operation. When the improved facility had been in service for some time a study was made to determine to what extent these benefits were being realized. Much to the surprise and chagrin of everyone concerned the study failed to show any improvement in operation or any economies.

Superficially it might be assumed that this is an isolated case and that unusual factors were present, such as poor judgment or incompetence in planning and design. Such assumptions would not necessarily be correct. In the first place, while this instance may be unusual in the failure to realize any benefits whatever from the "improvement," it is a fact that many engineering officers, as well as those in other departments, can recall instances of improvements from which the advantages actually realized were less than those on which the decisions to do the work were predicted.

Where this happens the explanation can lie with one or more of several possibilities. One of these is that the new or improved facility is not being used in the manner for which it was designed. The blame here does not necessarily fall on the designing department but can perhaps be attributed to lack of collaboration between the designing agency and the user. If the facility has not been designed to meet the needs of the using department to the

best advantage, this also may indicate lack of collaboration. Another possibility is that the estimates of savings to be realized from an improvement were based on theoretical considerations that have not proved valid in actual practice. Also, there is the possibility that the estimates of savings were made on the optimistic side to justify an undertaking that was considered desirable or necessary for other, and less tangible, reasons.

Whichever one of these explanations may apply, the failure of an improvement to show the savings or other benefits expected cannot help but be a source of embarrassment to those responsible for making the decision to proceed and for executing the work. Such an occurrence is not to be taken lightly for it means that the money expended is not bringing an adequate return—and this is poor business. The fact that many design features of railroad facilities must be based on empirical data, rather than exact computations, may be an extenuating circumstance, but it is not an excuse.

If there is close liaison between the designing and using departments, if there is expert attention to design and layout, and if there is careful appraisal of the potential advantages, devoid of wishful thinking, then there can be little opportunity for embarrassment when the actual benefits realized from a particular project are placed side by side with the original estimate.

WHAT ARE PROFITS?

No word has greater variety of meaning than "profit." This looseness in the employment of a crucial term is highly regrettable. Today there is a positively dangerous misconception as to the place of the profit motive in our national economy. To many the word "profit" has become synonymous with usury, and politicians are exploiting that error for political ends.

We cannot acquit of blame those managements who have drawn up obscurantist or apologetic accounts, which, to friend and foe alike seemed deliberately drawn up to hide as much as possible. What is hidden is bound to arouse suspicion—often needlessly. So the fiction has grown up that profit-making is an anti-social activity.

This is not a case where ignorance is bliss. It needs intelligent propaganda to counter it. Otherwise, if harm is done to the national interest, as well as to investors, companies will have themselves largely to blame.

Management is hired to produce a profit. Profit is, in essence, the symbol of efficiency. The profit movement of any company over a period long enough to include both boom and slump is a reliable index of the skill applied by management to its affairs. Why should large numbers of the community, then, regard the earning of profit as bordering on indecency, the mere gaining of sectional or class advantage?

In reality, the profit-earner is a contributor to national welfare. If he is efficiently producing goods urgently needed, the greater is his output and turnover with the labor, raw materials, and the machine capacity at his disposal, and the larger is his margin of profit.

-E. J. Seifort, president of Pettibone Mulliken Corporation.

EFFICIENCY IN PRESS RELATIONS

In these pages in our February 21 issue, it was reported that the so-called "press rating index" compiled by the James S. Twohey Associates had shown a comparatively low gage of performance for the railroad industry during the second half of 1947. Since that time the railroads have fared much better at the hands of the press—according to the Twohey index—and in May they achieved a rating of plus 30.1, which was an all-time high for the railroads and approximately twice as favorable as the score attained by the air lines in the same month.

What this rating signifies is that more newspaper readers were exposed to favorable or "neutral" news about the railroads than to unfavorable news, in an amount equal to an average of about 30 railroad "stories" in every 100 newspapers on every day of the month. The coverage of the railroads by the press, and the "visibility" of the reports printed, also showed improvement.

Newspaper publicity is by no means the whole of public relations, but it is a most important aspect of the general problem. Like all successful public relations, favorable press relations must start with behavior which is actually in the public interestno publicity man, however skillful, can succeed indefinitely in giving an impression of a company at variance with its actual behavior. But, unfortunately just being good is not enough. There is a technique involved in getting credit for displaying a proper concern for the public interest. The most important part of the technique is in being ready at all times to give candid, complete, and prompt answers to all the questions the press seeks to have answered. Certainly, at least as far as the Twohey index is concerned, the next important step must be to "blanket" unfavorable news with that which is favorable.

Specifically, if someone in an authoritative position around a railroad or in a position to speak for the railroad industry acquires the reputation with the press of being always ready with a prompt and newsworthy rejoinder whenever anybody attacks the railroads—then few newspapers are going to print unfavorable news without giving this spokesman a call to see whether he is ready with a reply. If he is then an answer which will take the edge off almost any criticism or unfavorable news will be published along with the bad news. Thus, an unfavorable story—if it is not turned into a favorable one—will, at least, be neutralized.

It seems quite evident that the railroads' technique in achieving a favorable press is definitely improving. If anyone doubts this, let him consider how the press, on the average, has handled the recent railroad strike threat; and the passage of the Bulwinkle Bill.



The installation includes four retarders, one down the hump and one on each of three groups of tracks

Reconstruction includes installation of power switches, car retarders, floodlights, loud-speakers, teletypes and radio, thereby permitting more switching to be done on schedule, which aids in getting trains out on time

B. & O. EXPEDITES YARD OPERATIONS AT CUMBERLAND

As a means of saving time for cars in transit, the Baltimore & Ohio has reconstructed a gravity-type classification yard at Cumberland, Md. The principal features of the project, which cost about \$600,000, were the grouping of tracks, the revision of grades and the installation of power switches, car retarders and floodlights, as well as new communication facilities, including teletypes, loud-speakers and radio. With these new facilities, the peak humping capacity is available at all times, day or night, regardless of adverse weather, and, therefore, all trains can be classified promptly on arrival, which saves time formerly lost when trains were delayed in the receiving yard or held back on sidings because the yard was congested.

Formerly a good average was to classify a 70-car train in about 55 min., whereas now such a train can be classified in about 30 min. These averages are based on trains including cuts of one or two cars each. Even with favorable weather and plenty of riders available, the previous operation was slower. For one reason, each rider tested the hand brakes before each car or cut was cut loose, and if the brakes did not hold, the humping was stopped. Now, with no riders, the use of retarders saves the time lost to test the brakes, and the movement over the hump is continuous and at a uniform speed.

Benefits Derived

All through-freight trains handled at Cumberland are operated on schedules in line with the "Sentinel Service" of the Baltimore & Ohio. Accordingly, ontime performance is particularly essential, and this factor, combined with the change of the operation in the yard from quick-dispatch traffic to coal traffic twice daily on a definite schedule, necessitates precision performance in this yard.

Among other things, the increased capacity to classify cars at Cumberland has permitted the transfer of work there from other yards. For example, the two trains daily for Potomac yard, at Alexandria, Va., are now made up at Cumberland for "main-tracker" operation through Brunswick, Md. Previously, these trains were made up at Brunswick, which is 97 mi. east of Cumberland, the cars being forwarded in small lots to Brunswick. Under this operation, the trains could not be completed at Brunswick until the last cars arrived. Previously, the yard at Connellsville, Pa., 92 mi. west of Cumberland, made up some coal trains for movement through to Brunswick. Now Connellsville bulks all coal cars to Cumberland, thus saving work at Connellsville, as well as Brunswick. Other important advantages of the new facilities are that the damage to cars and lading has been greatly reduced, and the overall efficiency has been increased.

For eastbound freight traffic, Cumberland is a junction of two important B. & O. routes, one from Chicago through Pittsburgh to Cumberland, and the other from St. Louis through Cincinnati to Cumberland. At points east of Cumberland, the traffic diverges. For example, at Miller, W. Va., 64 mi. east, connection is made with the Western Maryland to Hagerstown, on a route thence over the Reading and other lines through Maybrook, N. Y., to New England. From Brunswick, 97 mi. east of Cumberland, the B. & O. has a freight line to Baltimore for through freight to that city, as well as to Philadelphia and New York. Also, from Brunswick there is a B. & O. route to Washington and to Potomac yard at Alexandria. Thus eastbound freight traffic from numerous points comes into Cumberland on two main lines, and. at points east of Cumberland, diverges to three main freight routes. Accordingly, Cumberland is a strategic point at which much of the eastbound freight traffic is classified.

Approximately 1,750 eastbound cars pass through this Cumberland yard daily. Practically all of these are loaded cars. Quick-dispatch traffic, consisting of merchandise, fruit, stock and manufactured products, is received in about 13 trains daily. Eight of these trains, known as the No. 94's, which arrive between 6 a. m. and 11 a. m., are classified by 1 p. m. and depart in seven trains due out between 10:30 a.m. and 1:30 p. m. The five remaining quick-dispatch trains, known as the No. 96's, arrive between 4:35 p. m. and 7:30 p. m., are classified between 6 p. m. and 1 a. m., and depart as seven scheduled trains between 8:15 p. m. and 1 a. m. Twenty-eight classifications are made of this quick-dispatch freight. Some trains include only two classifications, as for example to Washington and Potomac yard, or to Maybrook on the New England route. Other trains include eight or ten classifications; for example, Baltimore meat and perishable on the head end, Philadelphia perishable, Philadelphia live stock, Park Jct., Elizabethport, Cranford, Staten Island, Bayway, New York perishable, and so on. Other trains are made up exclusively of cars for Jersey City and New York.

In addition to the quick-dispatch trains, several solid trains of loaded coal cars are received daily from the Pittsburgh division, about 300 cars originating in the vicinity of Somerset, Pa., and the remaining 150 cars near Connellsville. This coal also is classified in this eastbound yard, about half of the movement being handled between 1:30 p. m. and 6:30 p. m., and the remainder between 1 a. m. and 6 a. m., i.e., in the two off-periods when no quick-dispatch cars are to be classified. Each car of coal is weighed as it passes over a track scale located between the crest and the steep incline down the hump. Cars not to be weighed pass over the scale on a dead track, the two tracks being arranged as a gauntlet with a switch at each end.

Yard Same Size as Before

Previously this eastbound yard had 16 classification tracks with capacities ranging from 22 to 36 cars. Limits established by the Potomac river and the bed of an old canal made it impracticable to lengthen the yard tracks. Furthermore, the number of yard tracks could not be increased readily because of the location of the main tracks on the north, and other yard tracks on the south. The solution, therefore, was to utilize the same number of tracks in practically the same location and make improvements by means of which cars could be humped faster and continuously at a steady speed.

To accomplish this result, power switches and car retarders were installed to dispense with switchmen to operate hand-throw switches, and to eliminate car riders to apply hand brakes as the cars went down the incline to the classification tracks. To adapt the yard for the use of retarders, the grades down the incline and throughout the length of the tracks had to be changed. To simplify the control and reduce the number of retarders, the track arrangement was also changed.

Previously the grade down the hump was about 0.7 per cent through the switches and then continued at 0.4 per cent for the entire length of the yard tracks.



The power switches and retarders are controlled by one machine

The grade down the incline was increased to about 3.0 per cent for about 100 ft., this steeper grade being required to accelerate the speed promptly, thus lengthening the separation between cars or cuts of cars to allow space and time in which to operate the power switches. From the lower end of this 3.0 per cent segment, the revised grade tapers off to about 0.2 per cent descending, which extends for the major part of the length of each yard track. This 0.2 per cent descending is just about right to overcome friction and wind resistance, and thereby keep a loaded car rolling at the speed at which it leaves the last retarder, which should be not more than 5 m.p.h. At the east end of each track there is an ascending grade of 0.3 per cent for about 200 ft., the purpose of which is to reduce the speed so that the first car can be stopped by a hand skate and thus establish the head end. These revisions of grade required that the tracks be lowered a maximum of three feet in the area through the switches, and raised three or four feet at the east end. Roughly, about 25,000 cu. yd. of material was removed and about 7,000 cu. yd. of fill was placed.

To reduce the number of retarders, the ladder track arrangement of switches down the incline was replaced by three groups of tracks with six tracks in group No. 1 and five tracks in groups No. 2 and No. 3. To minimize encroachment on the length of yard tracks, the first two switches in each group are lapped. The turnouts are No. 8 with 13-ft. points, except for the laps, in which the combined frog is a No. 7, and the other two are a No. 8 and a No. 9. With this lap arrangement, the distance from the first switch to the most distant clearance point on all six tracks can be as low as 275 ft. With this group arrangement, a retarder is located on the lead to each of the three groups, and another retarder is located on the lead down the hump, thus requiring only four principal retarder locations to serve all the 16 classification

tracks. New 131-lb. rail and frogs were installed down the hump and through the retarders and switches beyond the clearance points.

Vertical Curve at Crest

The hump could not readily be raised, lowered or moved to the east because of the location of the track scale, which is just east of the hump. When cars to be weighed are passing over the scale, the speed must be slow enough so that a car is on the scale 5 sec. The speed of loaded coal cars is reduced to approximately 3 m.p.h. by a special snubber retarder 31 ft. long on one rail and located between the crest and the scale. For an entire train of loaded coal cars, this snubber retarder is set up and left in one position without change.

In addition to reducing the speed, this snubber helps to bunch the slack and thereby aids in uncoupling the cars. To allow track length for this snubber retarder, the hump had to be moved to the west. At the same time the vertical curve of the hump was revised to permit safe passage of the Mallet-type (EM-1) steam locomotives used in road service. This necessitated further changes in the crest, as well as in the grades ascending eastward from the receiving yard to the crest.

All these track changes and revisions of grades were made under traffic, the work being carried on piecemeal by taking first one section and then another out of service while cutting and filling, as well as relocating the tracks and installing the new switches and turnouts.

Power Switches and Retarders

The control machine, power switch machines and the car retarders, which are the electro-pneumatic type, were furnished by the Union Switch & Signal Co. The power switch machines are the direct-acting type, and are so controlled that if air pressure is applied to move the switch the operation is completed to the opposite position regardless of the fact

that the control may be interrupted. No lock rods are used on these switches, and, if a trimmer engine trails through a switch, it automatically goes over to the opposite position.

At each switch there is a color-light type target with lamps facing in both directions. When the switch is in the normal position to divert cars to the left, a green lamp is lighted, or, when a switch is reversed to divert cars to the right, the green lamp is extinguished and a yellow lamp is lighted.

The short snubber retarder between the crest and the scale, already mentioned, is 31 ft. long and applied to only one rail. The remaining four retarders are applied to both rails; the one on the main lead down the hump being 56 ft. long, while each of the three on the separate leads to the groups of tracks is 75 ft. long.

At the crest of the hump there is a signal mast with two signals, one faced westward to the receiving yard to direct operation of the pusher engine, and the other faced eastward to the classification yard to direct operation of a locomotive when trimming. These signals are the color-position-light type. The aspects on the pusher signal are (1) green for bringing a train up at full speed; (2) yellow for half speed; (3) lunar white for normal hump speed, 5 m.p.h.; (4) red for stop; and (5) flashing red for back up. On the trimmer signal red indicates stay in the clear and lunar white indicates proceed with the trimming.

The hump foreman, who has charge of the crew pushing cars over the hump, is stationed at the crest of the hump. He has a small control panel including three levers, one for the hump signal, one for the snubber retarder, and a third to control the power switch at the west end of the gauntlet track over the scale. A spring switch mechanism is used at the east end of this gauntlet. The other power switches and retarders are controlled from a machine on the second floor of a new brick tower, located to the north of the yard.

Several forms of communication were installed to aid in expediting operation of this new yard. An inter-



The classification yard is situated between the main tracks at the left and the other yards at the right

communicating system includes microphones and loud speakers at (1) the hump conductor's shelter near the crest, (2) in the yardmaster's office, (3) in the retarder control tower, and (4) in the shelter house at the east end of the yard. Using this system, a person at any of the four locations can call any or all of the three other stations immediately, merely by talking into the loud-speakers which are designed to operate as both microphones and speakers. This equipment was furnished by the Bendix Corporation and is to be coordinated with the Bendix radio which has been received for, but not as yet installed on, the five locomotives used for humping and trimming in this yard.

A separate microphone in the retarder control tower operates a large Western Electric loud-speaker mounted on the track side of the building. With this speaker the retarder operator directs the work to be done by the men assigned to place skates and ride cars with special lading.

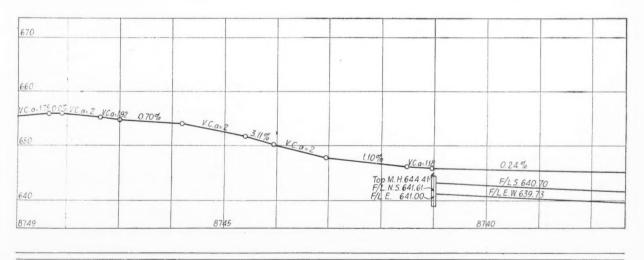
Page-printer teletype receiving machines are located in the retarder control tower and in the hump conductor's shelter house at the crest of the hump. These two machines are operated from a sending machine in the yard office, and are used to transmit the switch lists which show the number of each car, the comparative weights, and the track to which each car is to be classified. The letters on these teletypes are all capitals and, along with the figures, are especially large, about 3/8 in. high, so that the typing can be read easily even at considerable distance. A special telephone circuit includes phones at each of the three teletype machines so that in case of difficulties or misunderstandings a direct telephone call can be made at once.

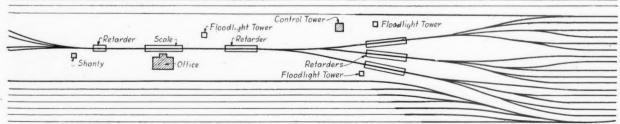
As part of the improvement program, floodlights

were installed to illuminate the yard so that operations can be conducted just as well at night as during the day. The floodlight units, furnished by the Pyle-National Company, are rated at 1,000 watts each, and are mounted on 100-ft. steel towers. Tower No. 1 has seven lamps, No. 2 and No. 3 each have nine, No. 4 has six, and No. 5 has five. The lamps are arranged and directed so that the calculated light intensity is 2 to 3 foot-candles in the area including the crest and down through the switches and retarders. As expressed by men working in the yard, the light is better than good moonlight and is adequate to read a newspaper. A lower intensity, about 0.3 to 0.4 foot-candles, is used throughout the length of the classification tracks.

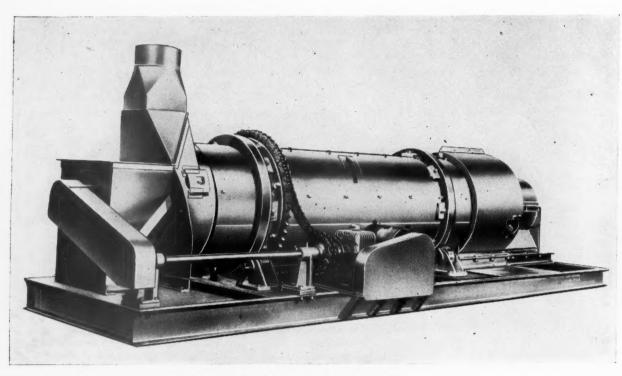
The floodlights can be turned on and off by switches in the retarder control tower, or they can be controlled by General Electric light-sensitive photo-electric devices on the towers, which automatically turn the lights on as darkness falls or off as dawn advances. The lamps operate at 115 volts, and the lamps on each tower are fed from a three-wire 115-230-volt circuit fed from the secondary of a transformer at the base of the tower. The control and indication circuits between the control tower and the switches and retarders are in Okonite underground multiple-conductor cables.

The design and construction of this project were under the jurisdiction of A. C. Clarke, chief engineer, and J. W. Jones, regional engineer. J. W. Packman, assistant engineer, was in charge of construction in the field. Communication and signal installations were under the jurisdiction of A. S. Hunt, chief engineer communications and signals, Wilmer Welsh, signal engineer, and L. J. Prendergast, superintendent of communications.





Profile and track layout of the yard as reconstructed for the application of retarders



Type A-8 direct-heat, rotary dryer-screener for drying and screening locomotive sand

SAND-DRYING UNIT

The Mines Equipment Company, St. Louis, Mo., is introducing into the railroad field for use in drying locomotive sand a unit known as the Type A-8 direct-heat, rotary dryer-screener, which, it is said, can automatically dry and screen sand at the rate of 2 to 3 tons per hour. It is driven by an electric motor and utilizes, for drying, the heat of an open flame produced by the combustion of either oil or gas.

Essentially, the equipment consists of a feed hopper; a rotating-drum dryer fitted with baffle plates and a stack; and, located at the discharge end, a rotating screen and a combustion chamber. The entire unit is mounted on a structural steel channel frame and, when properly installed, is situated in such a manner that the discharge end is 8 in. lower than the feed end.

Wet material is fed into the unit by gravity through the feed hopper, from which it is carried into the drum dryer by a screw conveyor. As the drum rotates, the material showers off its baffle plates and, at the same time, is subjected to the direct heat of the flame. Each revolution brings the material closer to the rotating screen and also to the source of the heat. As the sand in a dried condition reaches the rotating screen, the latter separates the fine from the coarse through separate openings.

The stack is located at the feed end of the heating drum, permitting an arrangement whereby the incoming sand in the hopper is preheated by contact with the hot outer walls of the stack. As furnished, the stack terminates in a 10-in. collar to facilitate extension (by the user) to meet installation requirements.

The combustion chamber has a lining of insulating brick between the outside metal enclosure and the circular fire-brick interior.

The rotary dryer drum and the feed-hopper screw are roller-chain driven by a 2-hp., 220-440-volt, 3-phase, 60-cycle, totally enclosed, fan-cooled, ball-bearing motor. Power is transmitted through a right-angle worm reducer (25-to-1 ratio) connected to the roller-chain shaft through a flexible-type coupling.

These dryers can be supplied with any one of three different heating arrangements, viz.: a low-pressure oil burner and blower directly driven by a 1-hp. motor; a high-pressure oil burner for operation with compressed air; or a gas burner using either natural or manufactured gas. To permit gravity feeding if oil is used, the oil supply tank must be situated not less than 15 ft. above the burner. If this arrangement is not practicable, an oil pump must be used. The unit is 13 ft. 8 in. long, 4 ft. 6 in wide; 3 ft. 3 in. high, and weighs approximately 4,500 lb.

PHOTOS TELL I. C. STORY.—By employing a minimum of words and a maximum of photographs, the Illinois Central effectively illustrates its 1947 accomplishments in a 20-page booklet recently issued to its employees. Some 35 pictures feature the publication, illustrating such diverse phases of the road's operations as safety, improvements in accounting methods, overseas freight business, suggestions and others. A series of photographs likewise illustrates the source and expenditure of the 100 pennies in each income dollar.

ELECTRIFICATION VS. DIESEL-ELECTRIFICATION

Summary of factors which management must consider when it wishes to replace steam locomotives and improve freight and passenger service*

By P. H. HATCH General Mechanical Superintendent New York, New Haven & Hartford

What will be the effect of Diesel-electric locomotives on electrification?" is a question frequently asked by both electrical engineers and railroad operators. To evaluate the situation, a brief review of recent railroad motive power development will be helpful.

The steam locomotive, the first type of motive power to be developed, has been in service for more than 100 years. It is still first place today in the number of units

The electric locomotive came into prominence about the turn of the century, to meet special operating conditions. These included smoke elimination in terminals and tunnels, and heavy mountain grade operation. Electrification has also had important applications in suburban service for the operation of multiple-unit electric trains.

The Diesel-electric first appeared as a switcher in 1923, as a road passenger locomotive in 1936, as a road freight locomotive in 1938, and was applied in combination passenger-freight service on the New Haven in 1941. Today, it surpasses all other types in locomotives recently put in service, now being built, or on order.

The reasons for the phenomenal growth of the Dieselelectric locomotive are based on high availability, quick turn-around, small amount of terminal attention required, flexibility of assignment, smoke and cinder elimination, absence of expensive terminal and wayside coal, water and ash facilities, rapid acceleration, good performance characteristics for heavy grade operation, moderate and easy maintenance by replacement of parts and simple, comfortable operation.

Locomotive Characteristics

Straight-electric and Diesel-electric locomotives both possess all of the qualities listed in the preceding paragraph. In fact, the Diesel is really an electric locomotive with a self-contained power plant. There are, however, two major differences. The electric locomotive is able to draw on a large power system for short-time overload demands. This makes possible high traffic-density operation. On the other hand, the Diesel-electric locomotive can go anywhere on the railroad permitted by clearances and weights. This combines the mobility of the steam locomotive with most of the characteristics of the electric. The self-contained Diesel power plant results in a virtually constant-horsepower locomotive.

As employed in most applications, the electric locomotive has relatively few driving axles with high horsepower per axle and a relatively low ratio of weight on drivers to total wieght. The Diesel-electric locomotive has many driving axles, with low horsepower per axle and high ratio of weight on drivers to total weight.

As commonly expressed electric locomotive horsepower is rail horsepower, while Diesel-electric horsepower is horsepower input to the generator for traction. A comparison of the New Haven EF-3 electric freight and a 3-unit DER-2 Deisel-electric locomotive is given in the table.

Locomotive Characteristics

	Electric	Diesel-Electric
	Locomotive	Locomotive
Total weight	493,000 lb	
Weight on drivers	360,000 lb	
Nom. hp		4,500
Cont. rail hp		3,800 approx.
Max. rail hp		3,800 approx.
Max. operating speed	65 m.p.h	65 m.p.h.
Starting tractive force 25 per cent		
adh	90,000 lb	
Cont. tractive force	52,000 lb	
Cont. tractive force speed	33.7 m.p.h	11.0 m.p.h.
Freight train tonnage rating Bay		
Ridge, N. Y. to New Haven,		
Conn	5,000 tr. tons	5,000 tr. tons
Starting assistance required	yes	no

Type EF-3

Type DER-2

The significant factors in the comparison shown in the table are the starting tractive forces at 25 per cent adhesion and the continuous tractive forces together with the speeds at which these tractive forces can be sustained.

Effects on Operation

In freight service, the electric locomotive is capable of higher speeds, but has less tractive force at low speeds because of the lesser weight on drivers. Because of this, starting assistance may be required, and momentum operation may be a necessary.

In passenger service, electric locomotive and Dieselelectric locomotive performance is equally dependent on rail horsepower for acceleration and running. The Diesel-electric locomotive, however, has the advantage of higher tractive force starting and at low speeds. Because of this, it may also be used in freight service within the rating of its traction motors and generators.

^{*} Abstract of a talk at the Northeastern District Meeting of the American Institute of Electrical Engineers, New Haven, Conn., April 28-30.

A New Haven 4,000-hp., two-unit, type DER-1 Dieselelectric locomotive, for example, is capable of a speed of 80 m.p.h., and can exert 119,000 lb. starting traction force.

One of these two-unit locomotives may be used to haul the "Merchant's Limited" from Boston, Mass., to New Haven, Conn., and to haul a 4,500-ton freight train eastward from New Haven.

The electric locomotive is solely dependent upon external power supply, and a major power failure can tie up the railroad or a large section of it. Sectionalizing of the overhead system and emergency feeding of power can minimize these effects. For protection of the electrified Hell Gate Bridge and West End territories, however, it is the practice to have Diesel electric locomotives available when there is danger of icing conditions. Icing hazards, incidentally, have been materially reduced by installing means for heating the overhead wire, a scheme developed by New Haven engineers for Hell Gate Bridge operation. Another method of avoiding troubles from sleet is to increase the pressure of the pantograph against the wire or to heat electrically important pantograph members.

Diesels' Limitations

Diesel-electric locomotives are independent of external power supply, but can deliver only as much power as can be developed by the engine. This may limit the traffic density which it is practical to handle with Diesel-electrics. Diesel power does not appear to be suitable for multiple-unit suburban trains and, even excluding the tunnel operation, it seems improbable that Diesel-electrics could handle the traffic on some of the electrified lines today and maintain present schedules.

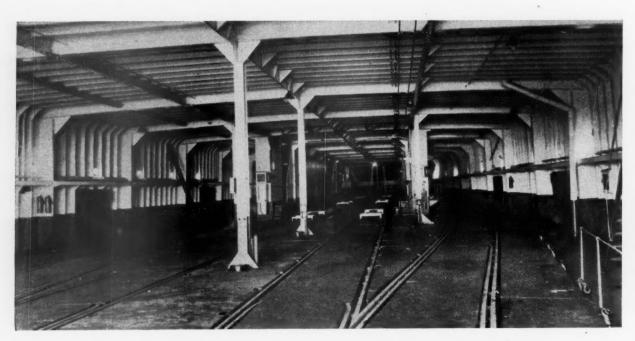
Diesel-electric locomotives are being brought to a high degree of standardization, and are built by production methods which makes their cost comparable to that of electric locomotives, while the cost of the power distribution system is eliminated. The Dieselelectric switcher will, in all probability, be standard on all railroads, regardless of the type of road motive power used.

Conclusions

Prophets and prophecies are not in good standing today, and this must be realized when anyone attempts to put himself in the place of railroad management. If it seems desirable to replace steam locomotives, and improve passenger and freight service, the management must choose either electrification, or Diesel-electrification. One choice involves the simple replacement of locomotives, with a minimum of other changes. The other involves the replacement of locomotives, and the installation of rather complicated overhead and wayside facilities. In all probability, it will also include signal changes.

Electrification will produce maximum capacity for the railroad. The use of the Diesel-electric locomotive results in increased, but not necessarily maximum,

Excluding special conditions, it is the consensus that railroad managements will choose electrification if traffic density warrants the additional capital expenditure. Otherwise, it will be Diesel-electrification as adopted by the great majority of railroads today.



BRITISH RAILWAYS' TRAIN FERRY—Sleeping cars roll right on the train deck of new cross-channel ferry boats such as this at Dover, and off again at Dunkerque, allowing passengers an uninterrupted night's journey between London and the continent

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Palletized containers, developed by the Southern Pacific for handling I.c.I. freight subject to transfers, can be moved from cars by mechanized equipment without disturbing the lading. Note holder with destination card on the container gate

SKIDDED CONTAINER REDUCES L. C. L. HANDLING

The Southern Pacific has developed a special container designed to expedite the handling of, and reduce loss and damage to, less-carload shipments. The principal application of the containers, which have a capacity of approximately 62 cu. ft. and a load limit of 3,500 lb., has been to merchandise shipments subject to intermediate transfers. Because the containers are mounted on skids, they can be readily handled in coordinated rail-truck service by fork-lift trucks, without the necessity for individual handling of the many shipments making up the container contents.

The containers are built 6 ft. high and approximately 3½ ft. square, so that they can be loaded 10 to a standard highway van, or 20—with an aisle space left for long shipments—in a standard box car. The construction—of plywood reinforced with metal—and the maximum loading capacity keep the gross weight within limits that permit the containers to be moved by hand hydraulic-lift trucks at points where power trucks may not be available. The top of the container is left open for greater flexibility in loading. The first containers had tops, but the design was changed to avert the difficulty sometimes encountered in filling the last few inches of the container. The gate forming one side is hung on brackets, so it may be removed or applied quickly.

Since the containers went into experimental service almost a year ago, there has been no reported loss or damage to the ladings handled, which fact the Southern Pacific attributes in part to the reduced handling of the individual items and to the overall protection afforded shipments by the container itself. Use of the containers has made it possible to effect the transfer of merchandise between vehicles in about one-sixth the time formerly required.



The fork-lift truck handles the container, which may hold a number of secarate shipments, as a single unit in a car-totruck transfer

MAINTENANCE-OF-WAY TRENDS SINCE THE WAR

By P. O. FERRIS Chief Engineer Delaware & Hudson A chief engineer tells of many recent advances which have brought about substantial economies in maintaining railway tracks and other facilities, but urges the constant development of new ideas to combat increasing costs

During the recent war, the cost of maintaining the railway plant was a secondary consideration. It was primarily a question of getting work done. Today, the picture has changed and we find that improvements in railway operation and the scarcity and high cost of labor have stimulated maintenance-of-way officers to originate entirely new ideas of maintenance which are considerably more economical.

Present high costs result not only from increased wages, but also by reason of less productivity per unit of labor. The most fertile field for reduction in maintenance-of-way expense, therefore, is in labor, and postwar trends have been largely influenced thereby.

The cost of labor-wages-constitutes more than

40 per cent of all maintenance-of-way expenses. This cost has more than doubled since 1940 and the end is not yet in sight. Material costs have also increased to a point far beyond anything dreamed of before the war, because of increased labor rates in other industries, because of scarcities created by strikes, and because of the increased demand for materials. Maintenance officers can do little about reducing these latter costs, but they can and are doing something about the costs over which they have control.

Maintenance-of-way expenses represent approximately 14 per cent of gross railway revenues and, during the last five years, have averaged 1.25 billion dollars annually. Only once before in the history of our railroads was the billion-dollar mark exceeded, and that was in 1920.

The major part of these expenditures has gone

This article is adapted from a paper presented before the New York Railroad Club, May 20, 1948.



Unloading strings of continuous-welded 132-lb. rail on the Elgin, Joliet & Eastern

toward the maintenance of the track and roadbed, the most important elements of which are rail, other track material, ties, ballast, and drainage. The heavy volume of traffic during and since the war, moving with ever-increasing speed in cars more heavily loaded than ever before and hauled by locomotives with axle loads exceeding 70,000 lb., has called for higher standards of track construction and maintenance. Consequently there is a definite trend toward a stronger track structure—by improving each of the elements mentioned.

Recent Improvements in Rail

Research has brought about many improvements in rail. We are now laying heavier rail than ever before to provide the strength needed to carry today's traffic at present-day speeds. This new rail is of an improved section, which provides longer life and better riding. At the same time—and of great importance—less track maintenance is required.

As a result of metallurgical research, today's rail is tougher and harder than that of the past. Rail ends are hardened and chamfered to reduce batter at the joints—the major limiting factor in rail life on tangent track. Also, almost the entire tonnage of rail is being "control-cooled" to eliminate rail defects—especially the dangerous transverse fissure. This intensive research is being continued. For example, we are still seeking the cause of shelly defects in rail—a major cause of rail failures on curves.

Considerably increased interest is being shown in the welding of rail into long lengths. Many installations of this type have been made and many others are being planned. Experience to date indicates that, for some installations, the labor savings alone amount to 40 per cent as compared with the cost of maintaining the orthodox jointed track.

An interesting observation regarding welded rail has been made on the D. & H. Whether it applies to other roads I am not in a position to say. We have yet to discover, by detector car or otherwise, a single transverse fissure in welded rail. Statistics of detected fissures, compiled by Sperry Rail Service, show that a rather large number of fissures develop near the rail ends and that a somewhat smaller number develop in the center of rails opposite joints. Welded rail, apparently, eliminates the effects of joint shock, which, presumably, has some influence on the development of fissures. This may not be important where controlcooled rails are welded in long lengths, since control cooling has practically eliminated the development of true transverse fissures. However, control-cooled rails do develop many detailed fractures and it is possible that eliminating joints by welding will reduce the number of such fractures.

Improvements in rail have naturally led to improved fastenings, especially at the joints. Longer joint bars have definitely proved economical and many roads are changing from the 4-hole, 24-in. joint to the 6-hole, 36-in. joint. The A.R.E.A. research staff has recently developed new bolt-hole spacings, further improving joints. Heavier trains and increased speeds have made necessary improvements in anchoring jointed track, even though the track is stiffer because of heavier rails



Studies are being made of the effectiveness of tie pads, placed under the tie plates, to prevent tie wear. This view shows a test installation of Fabco tie pads in main track on the Louisville $\mathcal E$ Nashville

More care is being used in the installation of rail. Modern power-operated rail-laying equipment, such as self-propelled cranes, spike pullers, spike drivers, adzers and nut runners, not only lay rail as it should be laid, but also lay it more economically.

Crossties Are More Costly

The cost of crossties is a major item of today's maintenance-of-way expenditures. A treated tie installed in track now costs between \$4 and \$5-double what it was before the war. Much is being done to extend the life of ties by protecting them from mechanical destruction, and research is under way to eliminate or at least reduce damage during seasoning, prior to treatment. More care is practiced in handling and storage. The use of larger and improved designs of tie plates is being studied as a means of reducing mechanical wear of the ties. Studies of adhesives to glue tie plates to ties to prevent movement of the plates, and consequent wearing of the ties, are under way. Tests are being made of fabric pads which are inserted between the plates and the tie for the same purpose. It is believed that it is possible at some locations to increase the life of cross ties by 50 per cent by such means. If this can be accomplished, reasonable expenditures for the protection can be justified.

There is a trend to increase the number of ties per rail length and, also, to use ties of greater length. The 8-ft. tie is no longer regarded as adequate for heavy-traffic roads and is gradually being replaced by the 9-ft. tie. There is no increase in labor cost for installing the larger ties and the increased cost of the tie itself is small. The managements of two major roads have already been convinced of the economy and other advantages of 9-ft. ties, and the Tie Committee of the American Railway Engineering Association has recommended the adoption of 9-ft. ties as standard.



An off-track grading unit in ditching work

Although expenditures for ballast are small in comparison with those in many other maintenance-of-way accounts, ballast is of great importance to the track structure. Present traffic requires the best in ballast—hard crushed stone where it can be obtained economically. The trend is toward improved ballast material and a deeper ballast section.

No matter how good ballast may be initially, the voids become filled with foreign material, such as droppings from cars, stack ash, engine sand, and material blown from the adjacent right-of-way. This material obstructs free drainage of the ballast and creates water pockets and soft spots which result in poor line and surface. Such ballast must be cleaned, but present labor rates prohibit cleaning by hand methods. As a result, ballast cribbing and cleaning equipment has been developed that restores the ballast to almost its original condition at a relatively low cost. Many roads are adopting this labor-saving equipment. Numerous types of power tamping machinery are also being used to assure firm, uniformly tamped track, free from the inequalities which frequently result when ties are tamped manually. Such equipment affords large reductions in labor costs.

Roadbed drainage is being studied more carefully and scientifically than ever before. No item of track maintenance is more important. Whatever money is spent on the track structure above an unstable subgrade is soon lost. The savings that can be made in labor costs by improvements in drainage are enormous. Because tracks have been occupied by traffic to almost full capacity during the war and since, on-track ditching and drainage equipment has become practically obsolete, the trend being definitely toward off-track equipment of this type. Many excellent labor-saving off-track machines have been developed. There are also combination ditching and grading machines for both on- and off-track use, and machines with attachments that can be used for many purposes, thus being useful throughout the year. This type of equipment, together with many other modern labor-saving devices, is reducing the heavy expense formerly necessary for work-train service.

Few railroads have been so fortunate as to be free of unstable stretches of subgrade caused by water pockets. Such conditions, existing for years, have been a continual cause of high labor charges for surfacing and lining track, as well as the cause of slow orders. An almost permanent cure, called pressure grouting, has been discovered and is being widely used. Briefly, this involves the forcing of a mixture of Portland cement and sand, or sand alone, sometimes with an admixture of asphalt, into the roadbed under pressure to displace pocketed free water. Almost complete stability has been reported in many locations, effecting large reductions in track labor. Some roads show savings in track labor as high as 70 per cent where grouting has been done.

New and improved methods of fighting snow and ice have been conceived and their use is being rapidly extended. Large track-mounted machines for loading snow into a tender-type tank, where it is melted by steam from a locomotive, have facilitated the removal of snow at several large terminals with large reductions in costs. Gas-burning switch-heating units with remote electric controls enabling the unit to be turned on and off by a dispatcher or operator, which have been invented recently, will eliminate almost entirely the track labor formerly required at important locations for the removal of snow and ice.

Improved Building Materials

Many new developments now being used in maintaining bridges and buildings will enable the railroads to effect other large savings. Greater use is being made of pressure-treated lumber of all kinds. Creosoted materials are being used more generally where long life is desired, but where painting is not required and where such use will create no hazard from fire. Where there is danger of fire and where painting is required, salt preservatives are being used, giving protection against both decay and fire. Older structures of untreated materials may be given a spray or brush application of fire-retardant material with good results.

The scarcity and high cost of lumber have led to

the more careful selection of wood products for certain applications. Treated black gum is being used where service is severe, such as in floors, platforms, and highway crossings at grade. South America greenheart, which needs no treatment, is fireproof, resistant to damage from marine borers and, as well, has a generally long life, is popular, particularly for piers and docks. The shortage of the larger sizes of timber is bringing the wider use of laminated, or built-up, timber in bridges and trestles. Other wood products, such as plywood, veneer and wallboards are being used on the interiors of many new structures instead of plaster.

Exorbitant labor costs have caused a definite trend away from the use of masonry materials to less expensive, yet durable, substitutes, such as corrugated sheet-metal, cement, asbestos, and glass, for the exterior walls of buildings. Glass blocks and corrugated wire-glass are being used more extensively in place of wood and steel sash in enginehouses and shop buildings. These materials are not only improvements over those they replace but are also more durable and less expensive to maintain.

Research has improved the quality and life of concrete considerably. The water-cement ratio principal, choice of better aggregates as to quality, size, and grading, and improvements in composition and fineness of cement, have tended to produce more permanent concrete structures. Furthermore, air-entrained cement is coming into use to prevent the scaling of pavements and the deterioration of concrete structures caused by freezing, thawing, and salt action.

Prefabricated Building Useful

Small prefabricated buildings have proved to be economical and are widely used for tool houses, for housing C.T.C. equipment, for watchman cabins, and other small structures. They are readily available, quickly installed, and can be inexpensively relocated as required. For larger metal buildings, the Quonsettype building is becoming popular.

Abutments and piers of old bridges are being stabilized by pressure grouting with enormous savings over cost of replacement. Plate girders in lengths up to

160 ft. are replacing inadequate truss spans with considerable economy.

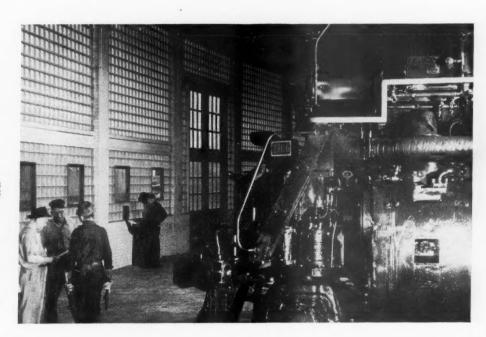
The use of labor-saving machines, tools, and equipment is increasing by leaps and bounds in the bridge and building department. Many types of tools, both electric and pneumatic, are now available. The use of electric tools has heretofore been limited to locations where power was available, but with the development of portable power plants of various sizes this use is now increasing rapidly.

Securing Foremen a Problem

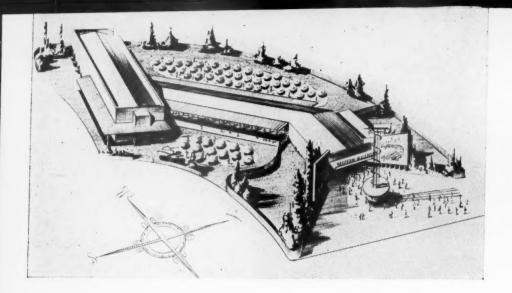
One of the most significant and disturbing trends in the maintenance-of-way department is the transfer of the allegiance of labor from management to union organizations. This trend, noticeable just before the war, slowed down during the war, no doubt because of patriotism, but it is again gathering momentum. The disturbing part is the influence this has on our foremen. Few of our old-time conscientious, loyal foremen remain. There is an old saying: "An ounce of loyalty is worth a pound of brains." We all know loyalty is invaluable. An organization will collapse without it.

The serious labor situation today makes one appreciate that each operation must be more carefully planned than ever before. Proper supervisors must be chosen, trained to analyze each operation, and to advance it to efficient and economical completion. Formerly, many of these men were drawn from the ranks of foremen. Today, many roads are hiring young graduate engineers for such training.

Since the cost per unit of most materials installed is more than twice what it was before the war, building must be for permanence, so that maintenance costs will be reduced to the absolute minimum. This requires the efficient application of the best quality materials that traffic and the life of the structure will justify, and the most effective use of labor-saving machines. Efficient management is looking for all ideas to this end. If the railroads are to maintain their supremacy as the most important transportation agency in the nation, they must heed the signs of the times and continue constantly to develop and adopt new ideas.



An installation of glass blocks in the outer circle wall of an enginehouse



An artist's drawing of the Eastern Railroad Exhibit, which it is expected will be visited by 2,000,000 persons at the fair. The display will be sponsored by the Baltimore & Ohio; Boston & Maine; Erie; Maine Central; New York Central; Pennsylvania; Wabash; New York, Chicago & St. Louis; and the Chicago, Indianapolis & Louisville



GETTING IN SHAPE FOR THE RAILROAD FAIR AT CHICAGO, JULY 20 TO SEPTEMBER 6



Work nears completion at the site of the Atchison, Topeka & Santa Fe's Indian village exhibit. Above is one of several authentic dwellings to be occupied by Indians during the six-week show

Left—More than four miles of track have been laid at the site of the fair. A portion of this trackage is here shown paralleling the shore of Lake Michigan and leading into the stage area where will be presented the pageant, "Wheels a' Rolling"



A passenger loading station will be located at each end of the narrowgage railroad which is to be an attraction at the fair. Visitors may ride the entire length of the grounds for a 10-cent fare

GAS-TURBINE FOR LOCOMOTIVE POWER PLANT

Consisting of turbine, axial compressor, regenerator, reduction gear, and two double electric generators, it is designed for installation on locomotive chassis

By WILLIAM B. TUCKER Allis-Chalmers Manufacturing Company

The gas-turbine applied to the service of a road locomotive has been considered for many years by engineers who have been interested in the development of this type of prime mover. One such unit has been built and tested in locomotive service in Switzerland.

In the approach to the problem of designing a locomotive gas-turbine, the designer is confronted with a number of features which must be considered throughout the development of the unit. Eight of these considerations are listed below. No attempt has been made to place them in order of their importance.

1—Satisfactory operation on low-cost fuel (a) over full range of power output; (b) over full rotational speed range and train speed range; (c) during acceleration of gas-turbine rotational speed and train speed for increasing and decreasing speeds, and during lateral and transverse shock such as are encountered in train operation; and (d) when traveling over irregular roadbeds.

2-High availability for service.

3—Weight within limits of desired axle loading without complicated truck arrangement.

4—Adaptability to quantity production to give low cost per horsepower output for such equipment.

5—High efficiency.

6—Low maintenance cost on unit by (a) long service life of parts; (b) low cost of replacement parts; and (c) accessibility of parts for repair or replacement.

7—Simplicity of control by (a) omission of nonessential functions to be performed in the operation of the plant; and (b) coordinating the duties of the governor, fuel control and control of auxiliaries, so that the operation of the plant will require a minimum of attention by the operating crew.

8—Minimum need for water—preferably none.

It is obvious that the most satisfactory locomotive power plant from the monetary and service standpoints is one the design of which is developed to give the best results when performing the assigned work for minimum cost.

With the above specification in mind, a locomotive gas turbine has been designed and is now being manufactured by the Allis-Chalmers Manufacturing Company, for the Locomotive Development Committee, Bituminous Coal Research, Inc. This gas-turbine unit operates on the simple open cycle with regenerator and drives a direct-current generator through gears. Electrical transmission of power to the driving axles allows the use of a well established transmission system for this service.

Performance and Control

The flow diagram indicates the sequence of equipment in the cycle with values of gas flows, pressures, and temperatures at various points in the gas path when operating at 1,300 deg. F. at the turbine inlet with ambient air conditions of 70 deg. F., 14.7 lb. per sq. in. absolute and when delivering 4,120 hp. to the reduction gear. Since the first application of this unit will be in connection with pulverized coal fuel, a fly-ash separator is shown in the cycle between the combuster and the turbine inlet.

A total pressure loss at rated load, through the combustor and fly-ash separator, of 2.8 lb. per sq. in. has been allowed. Pressure losses of 1.2 lb. per sq. in. and 0.42 lb. per sq. in. through the air and gas side, respectively, of the regenerator have been established to give maximum efficiency of the cycle within the cab space allowable for this equipment.

An initial gas temperature of 1,300 deg. F. and a pressure ratio of 4.8 was decided upon after considerable study of the influence of gas temperatures and pressures on the life of the highest-temperature parts, and the effect on the efficiency and on the size of components, including the combustor and ash separator.

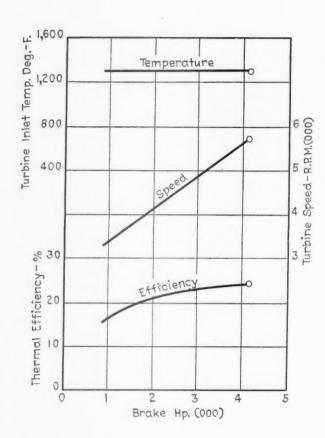
On the basis of the information in the flow diagram the unit will deliver 4,120 hp. to the reduction-gear pinion at 24 per cent shaft thermal efficiency when the combustion efficiency is taken as 96 per cent and the combined pressure loss through the combustor and ash separator is 2.8 lb, per sq. in.

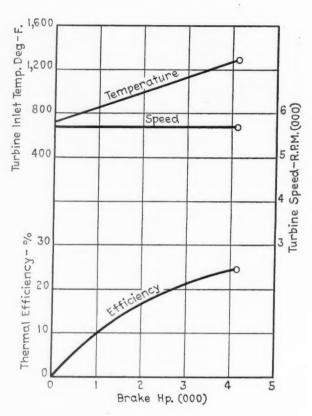
The unit will perform equally as well on fuel oil as on coal. Operation on fuel oil is anticipated during short intervals of time, such as when starting. If this gas-turbine unit is installed for operation with oil fuel only, a higher efficiency will be realized because of the reduced pressure drop between the combustor outlet and the turbine inlet by reason of the elimination of the ash separator.

The unit will operate under three principal conditions of load control: (1) constant temperature with varying speed; (2) constant speed with varying temperature; and (3) varying temperature and varying speed.

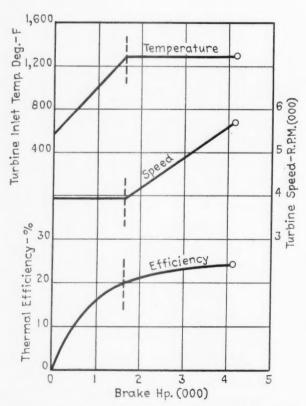
When the unit operates at the constant design

A paper presented at the semi-annual meeting of the American Society of Mechanical Engineers at Milwaukee, Wis., on June 1, under the auspices of the Gas-Turbine Power and Railroad Divisions.





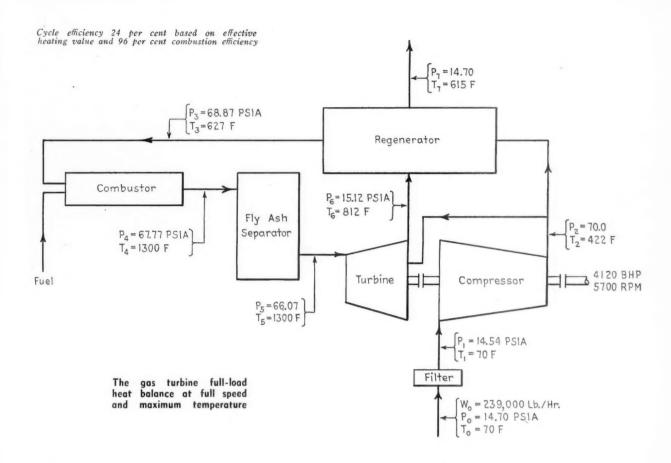
Left—Performance of a 4,100-b.hp. gas-turbine plant under speed control. Right—Performance of a 4,100-b.hp. gas-turbine plant under temperature control



Performance of a 4,100 b.hp. gas-turbine plant under combined speed and temperature control

temperature and variable speed over its load range, the highest thermal efficiency results for all loads from approximately one-fourth load to full load. The efficiency at rated load, temperature and speed is 24 per cent while the efficiency at 1,000 horsepower is shown to be 17 per cent at a speed of 3,400 r.p.m. The unit may not be operated below the lowest point shown by the curve unless the initial temperature is reduced since the pumping range of the compressor is approached at this point.

Where operating at constant speed and varying temperature it will be noted that at 1,000 hp. the temperature is only 880 deg. F. and the efficiency has dropped approximately 10 per cent. From the graphs showing these two methods of operation, it is clear that in order to have the highest efficiency at light loads the turbine inlet temperature should be maintained as near to the design temperature as possible. Therefore, let us consider the graph showing the combined method of operation. This shows the efficiency decreasing from 24 per cent at rated speed, temperature and horsepower to approximately 16 per cent at 1,000 hp. at a speed of 3,900 r.p.m. and a temperature of slightly over 1,000 deg. F. By comparing the constant-temperature and variable-speed graph with that of the combined method of operation we see that better efficiencies can be secured at light loads when the speed is reduced and constant temperature is maintained. By the regulation of the speed and temperature as shown for the combined method



of operation the best overall operating result is secured.

The gas turbine unit consists essentially of the following principal components: a compressor of the axial-flow type; the reaction-type turbine; a direct-current generator with two shafts; the reduction gear consisting of a pinion between two low-speed gears which drive the main-generator shafts; a regenerator of the straight-tube type, and a combustor and fly-ash separator, to be furnished by the user.

Since the underframe on which these parts are to be mounted is subject to considerable distortion as the locomotive moves over the track, it has been necessary to mount them in such a way that good operation of the unit will continue without being influenced by the frame distortion.

The Gas-Turbine

[The author described in detail a suspension in which the turbine and compressor shafts are coupled by rigid flanges and, with the bearings at the two ends of this continuous shaft, are mounted in a rigid structure consisting of the axial-compressor housing and a cradle in which the turbine housing is carried. The cradle is bolted rigidly to a flange on the end of the compressor housing. This structure is carried on the locomotive by two supports under the cradle and by a single cylindrical sliding bearing at the high-pressure end of the compressor casing which is supported on the reduction-gear case. Change in alinement between the compressor shaft and the reduction gear is taken care

of by a quill shaft which passes through and drives the hollow pinion shaft of the reduction gear.—EDITOR.]

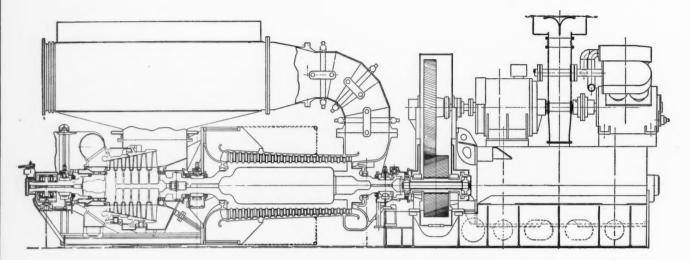
The prime-mover element, shown in section in one of the illustrations, is a six-stage reaction turbine designed to deliver 12,243 hp. to the turbine-compressor coupling at a speed of 5,700 r.p.m. when the inlet gas temperature is 1,300 deg. F. and compressor air inlet conditions are 14.7 lb. per. sq. in. and 70 deg. F.

The turbine spindle body is a fabricated construction consisting of six disk forgings of equal diameter which are machined and welded together to form the blade-carrying portion of the spindle. Stub ends are welded to each of the end disks to form the bearing and coupling ends of the spindle. This type of spindle has been successfully used in many types of gas and steam turbines.

The material of the disks and the stub ends exposed to high temperature gases is the Allegheny Ludlum S-590. The basic composition of this alloy is as follows:

								er Cen
Cobalt								20.0
Chromium								
Nickel								20.0
Tungsten								4.0
Columbium								4.0
Molvbdenu	n	2						4.0

This material was selected primarily because of its physical properties at temperatures of 1,300 deg. F. and higher. It is expensive because of the high tungsten and cobalt constituents, which are in the category of critical materials. Experience with less expensive materials which are more readily available is promis-



Allis-Chalmers locomotive gas-turbine power plant. The length from the end of the bearing at the left to the end of the generator base is about 27 ft. 7 in.

ing and they may be used in the future when greater experience with the operation of the unit has been accumulated. Supersonic inspection of the metal before and after forging has been an aid in determining the quality of the spindle parts. The integrity of the disk welds will be checked by radiographic inspection.

Serrated axial grooves across the circumferential faces of each disk are machined to receive the roots of the turbine-spindle blades.

The cylinder is subjected to a working pressure of approximately 70 lb. per sq. in. at the high-pressure end. It is supported on the cradle at the horizontal joint and in this way receives no shock forces from other components as they are distributed to the cab frame through the cradle and the central locating pin between the two lateral cradle supports.

The first four rows of blading will be precision cast while the last two rows will be forged to shape. All blades will be of the S-590 material. The roots of the cylinder blades are machined to fit in circumferential grooves in the cylinder rings. The spindle blades will have axially serrated roots to fit the spindle grooves. The tip speeds of the longest and shortest spindle blades are 895 ft. per sec. and 675 ft. per sec. respectively.

The blading is designed to maintain radial equilibrium of flow through all stages. All blades are warped and tapered to a considerable degree and are sufficiently stiff so that bracing wires are not required. No shrouds are used. The blade tips are sharpened to reduce the effect of an accidental blade rub.

The high-pressure gland seals the hot gases from escaping between the stationary and moving parts at the high-pressure end of the cylinder, it cools the turbine spindle at this point in order to reduce the maximum temperature of the rotating element, and it reduces the temperature of the turbine spindle at the adjacent bearing journal.

Air from the compressor discharge, which is at a higher pressure than the inlet to the first stage of the turbine because of the pressure loss through the regenerator and combustion system, is admitted to a belt around the gland. A portion of it enters the tur-

bine gas path at the entrance to the first spindle row of blading by passage through the labyrinth at this point. This quantity of air being much cooler than the air entering the turbine inlet will keep this portion of the spindle in this high-temperature region cooler than it would otherwise be and thereby increase the life of these high temperature parts.

A further amount of compressor discharge air flows through the gland labyrinth packing along the surface of the turbine spindle to the suction of a smaller exhauster fan. This creates a flow of relatively cool air along the turbine spindle from the bearing oil baffle to the root of the first moving row of blading, thus avoiding the escape of hot gases into the locomotive cab, cooling the highest-temperature part of the spindle to give longer life, and avoiding high metal temperatures at the adjacent journal bearing.

The low pressure labyrinth gland is of similar construction but only a sufficient amount of compressor discharge air is introduced in order to avoid hot exhaust gases being discharged against the bearing at the low-pressure end of the turbine.

The main turbine and compressor bearings are designed in accordance with the general principles of sleeve-bearing construction commonly used in steam turbine practice. A Kingsbury type thrust bearing is located in the bearing housing at the high-pressure end of the turbine and maintains the axial position of the turbine spindle relative to the cylinder by a steel rod on each side of the bearing which transmits the motion of the turbine cylinder directly to the thrust bearing.

The Compressor

The compressor is of the axial flow type and is placed between the turbine and main reduction gear. This arrangement allows sufficient space for a regenerator to be placed in the cycle in a position above the turbine and compressor. This type and size of compressor has demonstrated, by many tests, that it is capable of operation with efficiencies exceeding 85 per cent.

The axial pressure thrust on the compressor rotor is opposed by the axial thrust on the turbine spindle. The thrust bearing maintains the axial position of the turbine spindle and compressor rotor relative to the stationary parts. The twenty rows of compressor moving and stationary blades are mounted in circumferential grooves in the rotor and casing. All blades have integral spacers and will be precision cast with accurately machined roots for fitting in the grooves.

The lubrication system is forced feed to all gasturbine, compressor, gear and generator bearings.

The main oil-gear pumps are driven by the main reduction gears and an auxiliary motor-driven pump is arranged to start automatically if the oil pressure falls below a predetermined amount. The motor driving the auxiliary pump receives its electrical power from the locomotive battery.

The lubricating oil is cooled by a suitable radiator with a motor-driven fan to secure the necessary rate of heat transfer. This oil-cooler installation will be similar to present practice on Diesel locomotives. An oil tank under the main reduction gear will provide ample capacity for the lubrication system.

Governors

The fly-ball type speed-control governor is driven from the main reduction gear. This governor operates in conjunction with the control system to maintain the desired speeds by controlling the rate of fuel flow to the combustors on the low-speed range and by controlling the excitation when operating in the constant-temperature phase. A radial action overspeed governor is provided to stop the flow of fuel to the combustors.

In order for the gas turbine to be available for quick starting after shutdown, a turning gear, located in the bearing housing between the compressor and the reduction gear, will maintain proper thermal equilibrium by periodically turning the rotating elements. The turning gear works on the pawl-and-ratchet principle and requires only a small amount of electrical power for operation.

The Regenerator

The size of the regenerator, which is mounted above the turbine, is based on space available between the roof of the cab and the exhaust nozzle of the turbine. Also, the width was established by the space available after satisfactory aisle widths on each side of the cab were allowed.

The high-pressure air is carried through the regenerator in straight tubes while the hot exhaust gases pass over the tubes and are exhausted through the cab roof to the atmosphere. The tubes are rolled into tube sheets at each end of the regenerator and the difference in expansion between the length of the shell and the length of the tubes is taken care of by a steel expansion joint at one end of the regenerator shell.

Steady plates spaced between the tube sheets avoid vibration and hold the tubes in place.

Since the weight of the gas turbine must be held to a minimum for good design practice, a number of arrangements were studied to determine the arrangement which would give a symmetrical weight distribution over the width of the cab, have minimum weight within limits of a high order of reliability and low order of maintenance, and occupy minimum volume in the cab.

The results of this study indicated that a two-shaft generator having two armatures on each shaft would result in a symmetrically arranged generator assembly with respect to the longitudinal centerline of the turbine, gear and cab. The height of such a generator is low so that four of the locomotive auxiliaries are mounted on top and driven from the main reduction gear. With this arrangement, it was decided to operate the generator shafts at 1,350 r.p.m. Further study showed that these shafts could be operated at 2,000 r.p.m. with considerable saving in weight without exceeding established practice for commutator speeds. This has been decided upon for this service.

The high-speed pinion operating at a rated turbine speed of 5,700 r.p.m. is located between a driven gear on each generator shaft turning at 2,000 r.p.m. The following locomotive auxiliaries mounted on top of the generator are driven from the main gear and operate also at 2,000 r.p.m.; two 175-kw. alternating current generators, one 30-kw. regulex exciter, and one 40-kw. direct current generator.

The unit will be started by two of the four main generators acting as motors to bring the unit up to starting speed of approximately 1,600 r.p.m. Power will be supplied by the locomotive battery or by a 200 hp. Diesel-driven generator which will be located in the auxiliary cab.



Interior of buffet-lounge car of the British "Flying Scotsman," put in service this summer





PULLMAN MEN "TALK IT OVER"

Completing third annual series of conferences which produce definite improvements in service and employee attitude

he Pullman Company management and its 14,000 conductors, porters and attendants have held service conferences for the third consecutive year in a series which began on February 26 and continued until June 10, comprising more than 1,100 separate conferences throughout the country. Pullman believes that the best means of meeting passengers' demands for better service and combatting competition is close contact between top management and employee.

While attendance at the conference is entirely voluntary and the men attend on their own time, attendance of both conductors and porters has been in excess of 99 per cent of all men available. The purposes of the conferences are:

(1) To impress on each employee the importance of the contribution he can make toward continued improvement in service;

(2) To convince him that he is being considered

as a person who is an important factor in the organization and whose opinions, suggestions or "gripes" will be heard and heeded;

(3) To convince each one that management, too, is made up of people who have problems to solve and jobs to do; and

(4) To tell employees something of the state of the business, its aims, its possible future and the responsibilities of both employees and management therein.

Selection of Leaders

Such an objective, it was thought, could best be accomplished through the conference method, but since a large group of employees, scattered and fluid, as are Pullman's car service force, could not be reached in any reasonable time by any one officer. 14 men were selected from among the traveling service supervisors (two in each of Pullman's seven operating zones) to lead the conferences. Half of the supervisors led Pullman conductor conferences, and the other half porter conferences, in the areas in which they normally travel, and are, therefore, known to the men and understand their problems.

Prior to starting their local conferences these leaders attend "briefing" conferences, of several days' dura-

Facing page (left)—Assistant vice-president Leach answers a question at a typical conductors' conference

Facing page (right)—An air of informality is achieved in this porters' conference in Los Angeles

(Right above)—Shown conferring before a meeting are (left to right) Mr. Leach, C. M. Fitzgerald, district superintendent, and L. B. Thompson, president, Los Angeles division, Brotherhood of Sleeping Car Porters

Below right-Conductor R. V. Lambert makes a point

tion, at headquarters in Chicago, where the program is reviewed and an outline of procedure is furnished to insure uniformity at all points. This outline includes the functioning of zone superintendents, district superintendents and agents in the program, as well as the role of the conference leaders themselves. The latter are armed with anecdotes, letters and sample subject presentations so that the "tone" of the conference may be established at the outset. At the same time, the leaders are cautioned against the use of notes or outlines during the conference, which would destroy the spirit of informality and group participation.

Well ahead of the beginning of the series, zone superintendents are asked to suggest dates for scheduling meetings; to give maximum publicity thereto; and to open each conference in person if possible. Also well in advance of each series the men are notified of the sessions by payroll enclosures, feature articles in Pullman News, personal notification by supervisors and "sign out" men, and, in some instances,

by union representatives.

Representatives of both conductor and porter labor organizations are supporting the conferences unreservedly. They urge their members to attend and themselves sit in on numerous conferences where they invariably express themselves as favoring the company's program. The union representatives, almost without exception, are fully aware of Pullman's critical competitive status and do not hesitate to adjure their members to perform the best possible service. To illustrate: one union representative, noted as a "tough customer," rose to his feet at a conference to express the opinion that while porters can never hope to equal airplane hostesses in charm or figure, the former can capitalize on a lifetime of experience in making the public comfortable-both awake and asleep-while hostesses generally stay on their jobs for only a few years before marrying off.

Railroad Staff Join In

To solve some of the mutual problems of Pullman and the railroads, at the invitation of Pullman, more than 300 representatives of both operating and passenger departments of the railroads have attended conferences this year at all Pullman service points





throughout the country. The participation of railroad staffs in the conferences has made it possible for Pullman's conductors and porters to discuss problems they encounter directly with the representatives of the operating roads, with excellent results. Railroad representatives who have attended have highly praised the program and the interest and concern of Pullman's employees in passenger service.

The main topics of discussion this year are: (1) good service; (2) "on-train" sales program; and (3) air-conditioning failures. The first stresses the many little things which the conductor and porter can do for the personal comfort and convenience of the passenger. The second deals with the importance of conductors and porters-in-charge making use of unsold space after train departure by selling improved

space to their passengers. This may involve transferring berth passengers to rooms, transfers from rooms to larger or more desirable rooms or, in cooperation with the railroad conductor, solicitation of coach passengers to "step-up" coach class railroad tickets to first-class. This particular program is said by Pullman to be successful in providing passengers with better accommodations than they were able to obtain before train time and to have materially increased both Pullman and railroad revenue. The third dwells on the adjustment of air and temperature controls and the correction of failures en route.

Details of Procedure

An attempt is made to schedule conferences so that the ideal group of 20 to 25 men can be formed. Conferences are made complete in one session of about 1 hr., 30 min., but employees are informed that they may remain over for the next conference—and many of them do. To enable employees to attend conveniently, the company posts a complete list of time, place and date of conferences for all districts, and employees on runs may, if they desire, attend in a "foreign district." Meetings are held in hotel rooms, railroad conference rooms, conductors' rooms and, at some points, in meeting rooms of the sleeping car, conductors or porters or brotherhoods. In fact in New Orleans, La., the porter conferences were held in rooms of the C.I.O. Maritime Union. In all cases the aim is to have privacy and an atmosphere of informal group discussion.

Conference leaders make every attempt to keep the discussion on the subject, but do not discourage talk on related subjects which may be profitable to the men. Every effort is made to bring out participation of the timid.

At the conclusion of all the conferences in each zone, the conference leader makes a written report to the zone superintendent, with a copy to the general offices and another to the district representative concerned. Therein he shows the number of conferences held, scheduled hours, attendance, and ratio of attendance to available men. In the body of the report the leader outlines any specific comments, criticisms or suggestions offered by employees, giving, wherever possible, specific information pertaining to the names of the individuals criticized, places, dates, train numbers, car numbers, line numbers, etc., so that each comment may be handled to a satisfactory conclusion. Furthermore, to gage the importance of any particular comment, the leader is asked to indicate the number of employees involved in its discussion or concurring in any suggestion offered.

Primary action on each comment is taken by the district superintendent. All comments processed by his district are listed in an "action bulletin" posted in conductors' or porters' rooms, together with a brief statement about the action taken and the results obtained. In Pullman headquarters in Chicago all suggestions received from the zones are broken down in detailed fashion by subject matter. A close check is made to see that, where practicable, remedial action is taken in all of the seven zones of the company on suggestions of a general nature. Headquarters also makes certain that, where no action is taken, employees are fully informed of the reason therefor.

Pullman has issued definite instructions that in no case may the name of any employee offering a comment be divulged by the conference leader, nor may any employee attending a conference be questioned concerning the name of anyone offering comment thereat. When individuals are specifically named in comments, their names are noted in the leader's report, but the comments are not included in action bulletins.

Comments which are introduced at the conference show a wide variety. Most of them are specific and admit either of conclusive explanation or of remedial action. Typical comments received include a request for new type of uniform, better positioning of diners with respect to revenue cars and a boost for light food service on lounge cars. As a result of porters' suggestions, late-departure cars have been spotted at stub tracks more accessible to passengers. Rearrangement of cars on a number of trains, by cooperation of the operating railroads, has eliminated the necessity for coach passengers to walk through sleeping cars after retirement hours.

Throughout the program Pullman emphasizes that it is holding *conferences*—not classes, not lectures, and not panels. While the district superintendent is asked to open each conference personally, he is instructed at the same time to bow out after he has welcomed the participants. Similarly, group leaders are warned to refrain from monologues and lecture presentations and, while they must guide the discussion through the subject-matter defined, to leave the rest to the employees.

Conference leaders are asked to remain seated while talking. The men are invited to remove their coats and to smoke. Conference leaders may not have a stenographer to take notes of the proceedings but are instructed that they may themselves take fragmentary notes, with the explanations to the participants that they are noting comments for subsequent action by the company.

J. P. Leach, assistant vice-president, in charge of car service employee activities, inaugurated the conference program. He is in close touch with the program and has himself attended 64 of the conferences in 28 districts and agencies, where he talked with more than 600 conductors and 2,000 porters.



One of the New York Central's regularly scheduled Dieselelectric locomotives

Si

C. & O. Explains Use of Turbine Locomotive

Officers assure stockholder new unit gives "satisfaction"

Decision by the Interstate Commerce Commission on an application filed by the Chesapeake & Ohio for authority to assume liability for \$3,500,000 of equipment trust certificates was awaited this week following a one-day hearing at Washington, D. C., on June 24 at which time George S. Jackson, of 230 West End avenue, New York, the C. & O. stockholder who has challenged that road's management on several recent occasions, assailed the contemplated expenditures. Examiners H. C. Howard and (Miss) G. M. Eddy presided.

Proceeds from the sale of the certificates-which already have been sold, subject to commission approval, to Halsey, Stuart & Co. at 99.5101 with a 23/8 per cent interest rate, representing an average annual cost of 2.47113-are to be applied toward the purchase of equipment estimated to cost \$3,555,248, as described in Railway Age of June 12, page 72. The equipment includes two 6,000-hp. steam-turbine electricdrive passenger locomotives, to be built by the Baldwin Locomotive Works at an estimated cost of \$547,451 each, and it is the acquisition of those locomotives which Mr. Jackson believes to be an unnecessary expenditure by the C. & O.

Jackson Charges Waste

Mr. Jackson's petition to intervene in the proceeding was noted in *Railway Age* of June 19, page 61. Although he had charged the C. & O. management with "unrestrained excesses and shocking wastes," and had asserted, among other things, that "critical financial results" already are manifest on that road, his intervention in the proceeding was restricted by the commission only to those issues presented by the application.

Appearing without counsel, Mr. Jackson personally cross-examined two C. & O. officers — C. B. Hitch, chief mechanical officer, and A. T. Lowmaster, executive vice-president—and R. P. Johnson, chief engineer of Baldwin's steam locomotive division, with respect to the efficiency and reliability of the two locomotives, one of which already has been shipped by Baldwin to the C. & O. Meanwhile, a similar locomotive is now being used by the C. & O. in pass-

enger service between Clifton Forge, Va., and Cincinnati, Ohio.

According to the C. & O. officers, two steam-turbines will be used in passenger service between Washington, D. C. and Cincinnati upon the receipt of lightweight passenger equipment, with the third locomotive to be held, as Mr. Lowmaster put it, "where we want it." The locomotive now on hand, it was testified, is not being used over the entire Washington-Cincinnati run because of the weight and length of the passenger equipment it would be required to haul. The present Washington-Cincinnati run, the C. & O. officers said, requires changing locomotives twice in each direction, resulting in three locomotives, including the steam-turbine now in use, being employed each way.

Both Mr. Hitch and Mr. Lowmaster testified that the steam-turbine has performed to their "satisfaction," although both conceded that certain "minor adjustments" had to be made. Together with Mr. Johnson, they denied Mr. Jackson's allegation that the steam-turbine was still in the "experimental" stage. "We wouldn't have taken the order for the locomotives if we thought they were experimental," Mr. Johnson told the intervenor.

Turbine in High-Speed Service

The C. & O. officers also testified that the steam-turbine already has made trips with heavier loads than it was designed to haul, including runs in mountainous C. & O. territory. The locomotive now in use, it was testified, is maintaining an average speed of 55 m.p.h. between Clifton Forge and Cincinnati, the C. & O. officers adding that the present one, in addition to the two on order, will be capable of maintaining speeds of 45 m.p.h. on mountain grades and 100 m.p.h. in level territory. The latter speed, Mr. Lowmaster said, could be attained with a load of 750 tons.

According to Mr. Lowmaster, all equipment sought in the application is "absolutely and urgently" needed because of increased traffic. The C. & O., he added, presently has on order 192 passenger cars—a reduction from an original order of 288 cars—4,000 hopper cars, 62 locomotives, 150 cabooses and two tugboats. "We intend to keep all the power we've got and buy more," he said, adding that the C. & O.'s 916 available locomotives are "not enough" to meet its traffic demands.

Both Mr. Lowmaster and W. H. Wenneman, vice-president, finance and corporate relations, of the C. & O., advised Mr. Jackson, in response to the

latter's questions, that the reduction in passenger car orders was prompted in part by a decrease in passenger traffic. They also informed the intervenor that no orders have been placed by the C. & O. for "Train X," the "modernistic" passenger train which has been widely publicized in advertisements and by Robert R. Young, chairman of the C. & O.

According to Mr. Wenneman, the C. & O. plans to continue throughout 1948 the procedure of financing equipment "as close to 100 per cent of its cost as possible," and then will proceed "as conditions as that time warrant." He said he had no doubt that the C. & O. will be able to meet its obligations as they come due, adding that such obligations will have no bearing on common stock dividend payments.

C. & O. Financing Technique

"By watching the market and exploring the situation," Mr. Wenneman continued, "we obtain better prices on issuing trusts of a moderate size, such as the one pending in the present application, than if they were \$20,000,000." By following such procedure, he said, the C. & O. has obtained lower interest costs, has been able to obtain a "broader market" for the certificates and has been able to ascertain more accurately the time the equipment being financed will be delivered. The \$3,500,000 issue, he added, has brought a "satisfactory" selling price.

E. B. Hager, representing Halsey, Stuart & Co., testified that, as of June 23, five-sixths of the \$3,500,000 issue already had been sold, although he admitted that the comparative relationship of the trust to the cost of the equipment was "unusual." The C. & O., he said, could have done "better" if the trust represented 80 per cent of the cost of the equipment. He asserted, however, that he had "faith" in the C. & O., and that the equipment, including the two steam-turbines, covered by the trust was "good collateral."

Meanwhile, Mr. Jackson offered considerable testimony in elaboration of those parts of his petition for intervention which discussed C. & O. affairs other than the equipment trust at issue. C. & O. counsel objected to this preentation, but Examiner Howard permitted the Jackson statement to go into the record, at the same time assuring the C. & O. counsel that the commission would "evaluate the evidence as to what is relevant and what is irrelevant." Earlier, the examiner had frequently expressed dissatisfaction with Mr. Jackson's method of cross-examining

C. & O. witnesses. For example, when Mr. Lowmaster was on the stand, he interrupted the proceedings and declared: "Mr. Jackson, I can't follow you—you've got both the examiner and witness confused."

Mr. Jackson said that he and his wife collectively own 550 shares of C. & O. common stock, and that he was seeking to "protect" their investment. He said he objected to the C. & O.'s investments in projects other than those affiliated with the railroad and he was critical of its expenditures on

passenger service.

Under cross-examination, Mr. Jackson conceded that he has had no experience in railroad operation, management or construction. He said he acquired his information from Railway Age, C. &. O. publications and from replies to inquiries which he had submitted to that and other roads. He further identified himself as an industrial engineer employed by the Western Electric Company, and denied that he had any connections whatsoever with carriers competitive with the C. & O. Among other things, he inserted into the record copies of letters which he said he had received from other stockholders objecting to the management and financial affairs of the applicant. He added, however, that he hoped the C. & O. would not use the identity of the writers of the letters 'in a manner that might be construed as intimidation," although he had been advised earlier by the examiner that he was not required to submit the letters in evidence.

It was agreed upon by both Mr. Jackson and the C. & O. that the proceeding should go directly to the commission for disposition thereby eliminating the necessity of a proposed report and oral argument. In this connection, it was pointed out by the C. & O. that Halsey, Stuart & Co., has a right to withdraw its bid on July 15, subject to five-days' notice, if the commission has not approved the issue by that time.

Two to Three Billions In Postwar Improvements

Amount authorized since end of war reported by R.B.A. after survey

Expenditures of between two and three billions of dollars already authorized or contemplated by the railroads of the United States in an improvement and modernization program indicate that the carriers are determined to make themselves equal to the demands of peace or war, according to the Railway Business Association in a 22-page pamphlet entitled "Railway Preparedness." The report, which was made



George F. Ashby (left), president of the Union Pacific, recently received a plaque on behalf of that railroad for having maintained the best employee safety record during 1947 among Group A carriers, i.e., whose employees worked 50,000,000 or more man-hours (Railway Age of May 22, page 58). The presentation was made in Chicago by Ned H. Dearborn, president of the National Safety Council, at a special luncheon meeting of the Council's board of directors

public on June 27 by P. Harvey Middleton, president, is based upon a survey of the plans of 33 Class I railroads operating 76 per cent of the railroad mileage in the country.

The report stresses that the modernization and improvement plans which it summarizes "are based on the assumption that the Interstate Commerce Commission will authorize rates sufficient to provide the revenue and credit necessary to keep the railways abreast of the nation's needs, in peace or war... The railways should be accorded the opportunity to earn a fair return upon their investments — to insure uninterrupted solvency, to attract new capital when required, to promote continuous modernization, and to maintain safety and efficiency of operation."

The Railway Business Association, the membership of which comprises manufacturers of railway supplies and equipment, has issued the report while the House committee on interstate and foreign commerce has under way its inquiry into the readiness and ability of the nation's forms of transportation to meet any defense traffic load.

Big Buyers, Big Figures

"The railways of the United States have on order at this moment well over a billion dollars worth of new equipment of the latest types," the report states. "In addition, they are currently spending hundreds of millions of dollars in the improvement of their roadbed, bridges, and other structures, on improved signals and other safety devices. The postwar expenditures of the 33 Class I railways make up an aggregate of over two billions of dollars. Similar postwar programs are under way on all Class I railways and it is a

fair assumption that, if complete figures were available, the total for all lines would be over three billions of dollars.

"In a world as unsettled as ours now appears to be, our railways must be in constant readiness against the day when the nation may again call upon them to implement the defense of the United States," the report continues. "Transportation is more vital now than at any previous time in our history. Not only has mechanized warfare reached a high degree of specialization, but new and more terrible weapons have been introduced. But no matter what shifts there may be in the disposition of our land, sea, and air forces, or changes in methods of warfare, men and munitions must be available at the right place and at the right time. Successful warfare depends on the mobilization and effective utilization of men, materials, and transportation, and none of these primary factors can function effectively without the help and support of the

The report goes into considerable detail as to postwar improvements made or initiated by the railroads. It states that from 1945 to 1947 the railroads ordered 224,139 freight cars, and 4,052 locomotives. New rail laid in replacements from 1945 to 1947 totaled 4,300,-000 tons, and in the same period crossties applied in renewals totaled 119,-500,000. From 1945 to 1947 the number of new signalling units placed in service totaled 32,452. On May 1, 1948, the railways (including private car lines) had on order: 135,176 new freight cars, and 1,572 new locomotives (including 117 steam, and 1,455 Diesels). In the first four months of 1948, 31,704 new freight cars and 411 new locomotives (including 5 steam, 4 electric and 402 Diesels) were put in service.

"Unlike other industries, the rail-ways must be in continuous operation," Mr. Middleton points out. "They cannot shut down for retooling. This means that every new device or appliance must gear in with what is already there, and, during the period of gradual transition, must work right along with the existing devices."

The pamphlet contains also a summary of the "platform" of the R.B.A. The essentials of the platform are an opportunity for the railways to earn a fair return on invested capital; competitive equality between various forms of commercial carriers; coordination of all forms of transport; equal opportunity in the use of transport facilities provided by public funds, subject to regulation; voluntary and permissive, rather than mandatory, consolidations of railroads and carriers of different types; and placing of all "for hire" interstate carriers under regulation by a single agency.

"During 1949," says the report, "Congress will have before it the difficult task of considering a new transportation policy more suitable to current conditions—a legislative undertak-

ing which always brings to the front social and political, as well as economic questions, which must be argued anew in the light of public interests as they

are now interpreted.

"The Railway Business Association will do everything it possibly can to promote a sound national transportation policy, fair not only to the railways, but to all forms of transport. It will also continue to fight for the continuance of private enterprise in transportation, because that is the front trench in the battle for the preservation of what we call the American way of life. It should always be remembered that in all the countries which have adopted socialism as their form of government, nationalization of transport and means of communication is always the first step in the taking over of all other basic industries.

The remainder of the report contains a summary of statements of the presidents of each of the 33 Class I railroads

included in the survey.

Steelman Again Fails To Mediate Op Wages

3 hold-out unions reported asking for third-round increase, too

Renewed efforts by Dr. John R. Steelman, assistant to President Truman, to mediate the wages and rules dispute involving the three holdout operating unions whose May 11 strike threat brought government control of the carriers under Secretary of the Army Royall, again proved unsuccessful this week. The week-long series of conferences at the White House broke up on June 30.

It was understood at that time that the brotherhoods involved were insisting that any settlement reached should also incorporate a third-round wage increase of approximately 16 cents per hour, in addition to the 15½ cents per hour recommended by the emergency board but rejected by the unions. The conferences were entatively scheduled to be resumed on July 2 as this issue

went to press.

Meanwhile, the twice-postponed hearing before Justice T. Alan Goldsborough of the United States District Court for the District of Columbia on the federal government's petition for a permanent injunction to restrain the brotherhoods and their leaders from staging a walkout had started on July 1. The hearing originally was scheduled for June 22 and, after being set back to June 24, was again reset to be held on the above-mentioned date.

As reported in Railway Age of June 26, page 131, Dr. Steelman on June 23 conferred with the three union leaders—Alvanley Johnston, of the Brotherhood of Locomotive Engineers; D. B.

Robertson, of the Brotherhood of Locomotive Firemen & Enginemen; and A. J. Glover of the Switchmen's Union North America-and subsequently with the chairmen of the railroads' three regional conference committees, D. P. Loomis, H. A. Enochs and C. D. Mackay. The meetings were the first since June 2 when the previous series broke down with an announcement by the union leaders that Dr. Steelman had failed to suggest a settlement basis satisfactory to them. It also was stated at the White House at that time that Dr. Steelman might invite the parties to confer with him again if he should find what he considered "common ground" on which a settlement might be reached.

Indicative of White House efforts to mediate the dispute is the fact that last week's separate meetings were followed on June 29 and 30 by a joint conference of the railroad and labor representatives with Dr. Steelman, thus marking the first time for weeks that both the management and labor spokesmen had conferred simultaneously with the President's aide.

The White House also disclosed that Frank P. Douglass, chairman of the National Mediation Board, conferred this week with Dr. Steelman, with respect to the dispute, and also with President Truman. It was reported, incidentally, that Mr. Douglass had advised President Truman of his intention to resign from the N.M.B.

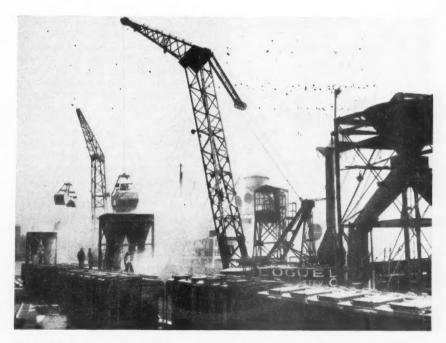
Meanwhile, the Justice Department

this week asked the United States Court of Appeals for the District of Columbia to deny the brotherhoods' appeal of Justice Goldborough's decision of June 10, when, as noted in Railway Age of June 12, page 65, he granted the government's petition for a preliminary injunction. The brotherhoods' appeal was reported in Railway Age of June 26, page 127.

"This case," the government said, "is of nationwide importance involving, as it does, the attempted restriction by the appellants of vital arreries of interstate communication after the government, to insure in the national interest the operation of the transportation systems in connection with the present emergency, has taken over possession, control and operation. In matters of such national signicance, this court should have before it the complete record available to the court below with adequate briefs and oral argument evolved after a reasonable time for preparation has been afforded."

Commission Will Extend Effective Date of Brake Order

The Interstate Commerce Commission has indicated that it will extend beyond January 1, 1949, the time within which the railroads must comply with its September, 1945, order in the Docket No. 13528 proceeding, wherein it directed all roads to equip on or before that date all of their cars used in freight service (except those cars equip-



Calcined bauxite ore from British and Dutch Guiana being unloaded from a ship at the New York Central's Pier 9, Weehawken, N. J., into covered hopper cars through the use of the new steel hoppers recently installed for handling this commodity. Said to be the largest facility of its type at any North Atlantic port, the pier hoppers were fabricated and erected by the Bergen Point (N.J.) Iron Works. In addition, Pier 9 has been equipped with automatic car-pullers and extra track capacity. Two 4-ton scoops hoist the ore from ships to the pier hoppers

ped with passenger-car brakes) with power brakes and appliances for operating power brake systems, subject to specifications prescribed by the commission

A notice issued June 24 by Secretary W. P. Bartel said that "it has now developed that there must be something in the way of a general extension of the period within which AB brakes are required to be installed." It added that the matter will be considered in "due course" and that an announcement with respect thereto will be made prior to the present effective date. At the same time, the notice said that it will be unnecessary for individual roads to file and serve formal petitions seeking extensions of time. It added, however, that if any party desires to submit by letter, on or before July 31, suggestions as to the details of the extension which should be granted, such suggestions will receive "due consideration."

Five—the Southern Pacific; Baltimore & Ohio; Elgin, Joliet & Eastern; Delaware, Lackawanna & Western and Illinois Central—already have asked the commission to extend the effective date of the order. Denial of those requests, however, has been sought in petitions filed by four unions—the Brotherhood of Locomotive Firemen, the Brotherhood of Locomotive Firemen & Enginemen, the Order of Railway Conductors and the Brotherhood of Railroad Trainmen.

Woshington Hearing in Bus Fare Probe Postponed to September 28

The Interstate Commerce Commission has set back to September 28 its scheduled July 13 hearing at Washington, D. C., with respect to its No. MC-C-550 investigation of bus fares. The hearing previously had been postponed from June 15 to July 13.

New Mail-Pay Plea Raises Proposed Increase from 45 to 65 Per Cent

The railroads have filed with the Interstate Commerce Commission a supplemental mail-pay petition raising from 45 per cent to (5 per cent the permanent increases in those rates which are sought in the pending proceeding. The 65 per cent boost would be added to the rates in effect February 18, 1947, and would result in an increase of something like 40 per cent in present rates which include the interim increase of 25 per cent that became effective February 1 and was retroactive to February 1, 1947.

In approving this temporary adjustment (see *Railway Age* of December 27, 1947, page 59), the commission deferred action on the permanent increase pending completion of cost studies to be made jointly by the railroads and representatives of the Post Office Department. The proceeding is docketed as No. 9200.

The supplemental railroad petition, which raised the proposed permanentincrease proposal from 45 to 65 per cent, was based on further increases in operating costs occurring since the original petition was filed. The petitioners told the commission that from the beginning of 1947 until the beginning of 1948 the weighted average unit prices of railway fuel and other supplies and materials have increased 19.8 per cent. That figure, they said, represents an increase of about \$348,597,000 annually in the operating costs of Class I roads on the basis of the volume of pur-chases in 1946. They declared that the total increased costs chargeable to operating expenses and payroll taxes due to increases which have occurred in the prices of materials and supplies, including fuel, since January, 1947, and in wages and payroll taxes since the original petition was filed, will amount to \$960,840,000 yearly for the Class I roads, or an increase of 20.5 per cent.

Asserting that their annual operating costs will be 68.7 per cent more than the operating costs at the 1940 level, the petitioners said that the 45 per cent request in the February, 1947, petition was predicated upon the known increases in operating costs as of that date above those of 1940. They have been unable and will continue to be unable, they said, to effect economies or savings to offset such increased operating costs to any "substantial extent."

Commission to Investigate New York Commutation Rates

Acting upon a petition filed by the New York, New Haven & Hartford, the Interstate Commerce Commission has instituted an investigation into the failure of the Public Service Commission of New York to permit that road to establish within the state of New York the same increases in commutation fares which the federal agency has authorized it to establish on its interstate commuter lines. The New Haven has estimated that extension of the increases to New York intrastate commutation fares would produce additional revenue of \$470,000 a year. The commission will assign the proceeding for hearing at a later date.

Meanwhile the New York commission has authorized the Long Island to increase its commutation fares on an "interim" basis. A 20 per cent increase was authorized last year for the period ending June 30, and on its expiration the road was allowed to apply a 25 per cent increase instead, this to be effective until the end of the year.

Truck Driver Blamed for Wreck Fatal to Railroad Passengers

Failure to stop a motor truck short of a train moving over a highway grade crossing caused the April 14 accident on the Chicago, Rock Island & Pacific at Kremlin, Okla., where a fast passenger train was derailed by the crossing collision and then proceeded to strike a freight train standing on an adjacent siding, according to the report of an Interstate Commerce Commission investigation conducted under the supervision of Commissioner Patterson. Five passengers were killed and 31 were injured, as were the truck driver and one train-service employee. The accident also involved a fire caused by the ignition of propane gas escaping from a fuel tank that was part of the air-conditioning system on one of the derailed cars.

Five-Car Train

The crossing collision occurred 209 ft. north of the north switch of the siding on which the freight train was standing. The highway is a Kremlin road which intersects the single-track rail line at an angle of 78 deg. 44 min. The passenger train was No. 509, the south-bound "Texas Rocket," which consisted of a Diesel-electric locomotive and 5 cars in the following order: 1 baggage-mail car, 1 dining car, 2 coaches, and 1 coach-observation-parlor car, all fitted with tightlock couplers. The first and second cars were described in the report as being of "conventional all-steel construction," while the other three were of "lightweight high-tensile-steel construction." The train was traveling 79 m.p.h., its limit being 80 m.p.h., when the third car was struck by the truck, which was of the dump type, weighing, with its load of road-building materials, 36,900 lb. The freight train on the siding consisted of 94 cars.

The crossing collision caused derailment of the rear truck of the passenger train's third car. This occurred about 51 ft. south of the crossing, and the wheels continued in line with the track a distance of 158 ft. to the turn-out of the siding switch, where all wheels of the fourth and fifth cars were also derailed. No separations occurred between any of the units of the passenger train, and the derailed cars were dragged between the main track and the siding a distance of 744 ft. where they struck the caboose and the rear 15 cars of the freight train.

The passenger train stopped with its front and rear ends, respectively, 1,886 ft. and 1,417 ft. south of the crossing. The rear end of its third car and its fourth and fifth cars were leaning against the eightieth to eighty-fourth cars of the freight train. The force of the impact turned the motor truck on its side, and it stopped with the front end on the railroad roadbed about 43 ft. south of the center line of the crossing.

Collision Damage

The derailed cars of the passenger train, as the commission's report put it, "were raked and damaged on their left sides" as a result of their collision with cars of the freight train. "The rear vestibule of the third car," the report continued, "was collapsed, and the side sheets below the windows were torn throughout a distance of 10 ft. im-

mediately ahead of the rear vestibule. The side sheets above the windows were torn throughout a distance of 5 ft. ahead of the vestibule. The front vestibule of the fourth car, the side sheets below the windows and between the vestibules, the rear vestibule, the left side sill, the seats on the left side and the flooring inward to the center sills were torn away. The center sills, the body bolsters and the crossbearers were bent. The battery boxes, the airconditioning fuel-supply system and other appurtenances below the body of the car were badly damaged. The front end of the fifth car, the side sheets below the windows throughout the length of the car, the seats on the left side, the flooring on the left side inward to the center sills, and the front body bolster and crossbearer on the left side were torn away. There was considerable damage on the left side to appurtenances below the body of the car.

The fatalities and injuries occurred in these fourth and fifth cars where the fire also broke out, resulting in their interior finishes and fittings being "totally destroyed," and their bodies being "warped as a result of intense heat." As for the freight train, its caboose was overturned and "demolished," the right sides of its rear 15 cars were "considerably damaged," and the eightieth to eighty-third cars, inclusive, were "considerably damaged by fire."

Effect of Fire

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The propane gas which caused the fire was found to have escaped through an 11/32 in. aperture from tanks on the fourth car where it was used as fuel for the internal-combustion engine that was part of the car's air-conditioning system. "The flame," as the report described the fire. "projected outward against the cylindrical portion of a tank car on the siding, then was directed into the fourth car of No. 509. The high temperature produced by this fame quickly ignited the interior fittings and fixtures of both the fourth and fifth cars." The air-conditioning system on the fifth car was of the mechanicaldriven type. As noted above, this car was a coach-observation-parlor car; it was 79 ft 1/4 in. long, built in 1937, and its light weight was 93,400 lb. The fourth car was an 85-ft.. coach built in 1947, and its light weight was 123,100 lb.

The commission's investigation disclosed that the approach to the crossing gives the driver of a highway vehicle an unrestricted view of an approaching southbound train throughout a distance of about 2.5 miles. The report also noted that visibility was not impaired by weather conditions at the time of the collision (2:46 p.m. on a "clear" day), and that there are two warning signs along the highway approach to the crossing. Moreover, the truck was engaged in hauling materials for a nearby highway-surfacing job, and the driver "said that he was familiar with the

characteristics of the crossing." He testified further that he looked to the north, but did not see the approaching train until his truck was a short distance from the crossing. He then steered the truck off the road in an attempt to avert the accident. The commission's investigators found that the celluloid windows in the canvas curtains of the truck's cab were streaked with red-colored mud; and the report said that "this condition impaired visibility to a considerable extent."

The enginemen of the passenger train said they sounded the crossing signal, and that they had observed the truck when their train was about one-half mile away from the crossing. The speed of the truck did not appear excessive to them, and they thought it would stop short of the crossing. Immediately after the engine passed over the crossing they "felt a surge of the train" and the brake valve was placed in emergency position. Oklahoma's motor-vehicle laws do not require trucks engaged in hauling non-inflammable materials to stop before entering upon a railroad grade crossing.

Benefit Operations in April

Retirement and survivor benefit payments under railroad retirement legislation made during April amounted to \$19,237,000, which, except for December, 1947, is the largest monthly figure to date, according to the Railroad Retirement Board's June "Monthly Review." At the end of the month, there were 310,984 benefits in current-payment status.

Operations under the unemployment insurance act advanced to a new high for the current benefit year. A total of \$3,798,000 was paid for unemployment in 132,070 claim periods, compared with \$3,438,000 paid in more than 120,000 registration periods during March. Applications and claims for unemployment compensation totaled 51,155 and 164,980, respectively.

Sickness insurance activities slackened substantially during the month, with the board's nine regional offices receiving 16,630 applications and 75,018 claims for sickness and maternity benefits, or 4,000 and 11,000 fewer than in the previous month. Payments to railroad workers amounted to \$2,593,000, or \$320,000 less than in April.

Emergency Board Appointed

President Truman on June 23 issued an Executive Order creating an emergency board to investigate a wage and rules dispute between the Grand Trunk Western, Chesapeake & Ohio, Wabash and Ann Arbor and employees in their Lake Michigan car-ferry services who are represented by the National Maritime Union. The railroads involved are among those which are under federal control and operation by the Secretary of the Army; and in that connection the Executive Order creating the board

said that nothing in it "shall be construed to derogate the authority of the Secretary of the Army" under the seizure order.

The members of the board are Judge R. G. Simons of the Supreme Court of Nebraska, J. L. Miller of Washington, D. C., and Judge T. F. Gallagher of the Supreme Court of Minnesota.

Supplement to Freight Commodity Classification

Supplement No. 3 to the A.A.R. Freight Commodity Classification, 1947 Edition, has been issued by the Accounting Division of the Association of American Railroads and sent to purchasers of the classification. An accompanying notice by Division Secretary E. R. Ford explained that the supplement, effective July 1, supersedes Supplement No. 2 which became effective January 1. It was prepared by the A.A.R. Freight Commodity Classification Committee.

Intrastate Fare Revision Sought by Alabama Roads

Eleven railroads operating within Alabama have asked the Interstate Commerce Commission to institute an investigation into the refusal of the Public Service Commission of that state to permit intrastate coach and first class passenger fare increases in line with those which apply to interstate traffic. The respective interstate coach and first class fares are now 2.5 cents and 3.5 cents per mile, whereas the intrastate coach and first class fares presently in effect in Alabama are 2.2 cents and 3.3 cents per mile, respectively.

New East-West Divisions Effective September 1

The Interstate Commerce Commission has set back from July 1 to September 1 the effective date of its February 12 order in the proceedings wherein it prescribed new bases for divisions of rates between eastern railroads generally and six western roads—the Chicago Great Western, Chicago, Rock Island & Pacific: Kansas City Southern; Missouri-Kansas-Texas; Missouri Pacific and the St. Louis-San Francisco—which refused to subscribe to the apportionment plan that was agreed upon in 1939 by other western roads and the eastern lines.

As noted in Railway Age of March 20, page 92, the commission's report, which drew dissents from Commissioners Miller, Splawn and Mitchell, was in No. 28277, embodying the nine-year-old complaint of the six dissatisfied western roads, and the related No. 28589, embodying a complaint (in the nature of a cross-complaint) wherein the eastern roads alleged that the complainants in the case were already receiving unjust, unreasonable and inequitable divisions.

Reopening of the proceedings, or, as an alternative, the institution of a new commission investigation of the divisions involved has been sought in petitions filed with the commission by the six dissatisfied roads. Such a request, however, has been opposed in a petition filed with the commission by 14 western roads and the eastern carriers, as noted in *Railway Age* of June 19, page 56.

P. R. R. Convention Operations

The Pennsylvania, in the period beginning on June 20, operated six extra trains into Philadelphia, Pa., to accommodate persons bound for the Republican party convention. Included were a special train from Los Angeles, Cat., for Governor Warren and his party, a special train from Chicago carrying Governor Green of Illinois and his party and a special train from Hartford, Conn.

In addition, there were 12 special movements, inbound. Among the outgoing trains, after the convention, were five extras, including a special train for Governor Dewey of New York, and there were 31 additional outbound special movements.

It has been announced by the railroad that six extra inbound trains, as well as seven special movements, have been scheduled to handle the extra traffic expected for the Democratic party convention in Philadelphia this month. Also, the P.R.R. tentatively has scheduled seven special trains from New York, Newark, N. J., and Trenton to Philadelphia, to handle the traffic for the Wallace third party convention.

N. Y. Tax Must Be Proportionate To Routes in That State

New York's gross-receipts tax on carriers operating between points in that state over interstate routes cannot be levied on the entire revenues collected on such routes, but must be "fairly apportioned" to the business done within New York. The United States Supreme Court has so ruled in a recent decision on an appeal by Central Greyhound Lines from a ruling of the New York Court of Appeals which had upheld that state's Tax Commission in its contention that the tax applied to the gross receipts on the routes involved.

The Supreme Court's 6-to-3 decision was announced in an opinion by Justice Frankfurter, while the dissent by Justice Murphy was subscribed to by Justices Black and Douglas. The tax in issue was New York's 2 per cent excise tax on the furnishing of utility services, which include services of carriers subject to the New York Public Service Commission. "Nearly 43 per cent" of the mileage of the Central Greyhound routes involved is over Pennsylvania and New Jersey highways, the remaining 57 per cent being over New York highways.

In sending the case back to the New

York Court of Appeals for "further proceedings not inconsistent with this opinion," the Supreme Court said there was "no dispute as to the feasibility of apportioning this tax." It added that "on the record before us the tax may constitutionally be sustained on the receipts from the transportation apportioned as to the mileage within the state." These conclusions were based on the court's findings that the transportation involved was interstate and that "by its very nature an unapportioned tax makes interstate transportation bear more than 'a fair share of the cost of the local government whose protection it enjoys.'

In the dissenting opinion, Justice Murphy argued with citations that "the rule requiring apportionment of gross receipts taxes to the activities carried on within a state is one that is necessarily predicated upon the existence of some interstate activities which the commerce clause places beyond the taxing power of the state." That rule he added, "obviously is inapplicable here where the tax is not levied on what is appropriately labeled interstate commerce."

"The fact that 42.53 per cent of the transportation occurs outside New York does not make that business any less local," Justice Murphy went on, "From the commercial standpoint, the out-of-state segment of the journey retains its position as an integral part of the continuous local transaction. The proportion of the transportation actually taking place within or without New York thus has no commerce-clause significance under these circumstances. Inasmuch as the restrictive force of the commerce clause is noneffective, New York is entitled to tax the total gross receipts from this local commerce."

P. R. R. Gets Third-Round Wage Demand from C. I. O. Union

The Industrial Union of Marine and Shipbuilding Workers of America, affiliated with the Congress of Industrial Organizations, this week presented to the Pennsylvania demands for a pay increase of 25 cents an hour and various changes in operating rules for the employees it represents. The union, formerly known as the United Railroad Workers of America, represents seven crafts on the Pennsylvania: electricians, sheet metal workers, boilermakers, carmen, helpers and apprentices, shop laborers and powerhouse employees.

Recommends Intrastate Freight Rate Adjustment in Tennessee

Examiner F. L. Sharp has recommended in a proposed report that the Interstate Commerce Commission find that "unjust discrimination against inters ate commerce" is caused by the refusal of the Railroad and Public Utilities Commission of Tennessee to authorize railroads operating in that state to apply the Ex Parte 162 freight-

rate increases to interstate traffic moving within Tennessee. The commission, he said, should issue an order making the corresponding increases effective unless it is notified by the Tennessee body within 30 days that it will permit the increases required.

The proceeding in which the proposed report has come, No. 29800, was instituted upon petition of the interested railroads after the Tennessee commission originally had denied the carriers' petition for authority to increase intrastate rates within that state to the level of rates authorized by the federal agency in Ex Parte 162. The Tennessee commission, however, later modified its original opinion so as to authorize an increased scale of class rates for distances up to 150 miles, and a limited number of increases in commodity rates and classification changes.

Noting these adjustments, the examiner recommended that if a commission order is issued, it should provide that the intrastate class and commodity rates that have already been increased by the Tennessee body should be further increased only to the extent necessary to bring them up to the level of the interstate rates.

Two Carriers Fined \$1,000 Each

The Interstate Commerce Commission has been advised that the Chicago, Burlington & Quincy and the Chicago, Milwaukee, St. Paul & Pacific each pleaded guilty in the federal district court at Winona, Minn., on June 15, to informations charging those roads with having violated section 1 of the Elkins Act. The carriers were fined \$1,000 apiece.

According to the commission's notice, the informations charged the carriers with having made unlawful deliveries of certain shipments without first securing possession of the order bills of lading as required by Rule 7 of the Consolidated Classification. The shipper involved in the same proceeding was fined \$2,000.

C.I.O. Paper's Political Article Didn't Violate Taft-Hartley Act

The United States Supreme Court ruled in a June 21 opinion that the Congress of Industrial Organizations and its president, Philip Murray, did not violate the Federal Corrupt Practices Act as amended by the Labor-Management Relations (Taft-Hartley) Act of 1947 when they distributed a regular weekly issue of the "C.I.O. which contained an article News" wherein Mr. Murray urged C.I.O. members in a Maryland congressional district to support a candidate for Congress in a special election held in July, 1947. The court's decision, announced by Justice Reed, dealt only with the case in hand, and involved no ruling as to the constitutionality of the Taft-Hartley-Act provision in issue.

That provision extends to labor or-

ganizations the Corrupt Practices Act's prohibition against contributions or expenditures in political campaigns, which previously applied only to corporations. The C.I.O. case involved the indictment of that organization and Mr. Murray, the indictments charging that distribution of the issue with the Murray statement was an "expenditure" of the type prohibited. The United States District Court of Columbia dismissed the indictment on the basis of its finding that the Taft-Hartley-Act provision was an unconstitutional abridgement of freedom of speech and the press.

The government appealed to the Supreme Court which affirmed the dismissal of the indictment, but based the affirmation on finding that the acts charged in the indictment were not prohibited by the provision, and expressed "no opinion on the scope of the section where different circumstances exist and none upon the constitutionality of the section." This failure to pass on the constitutional question prompted Justice Rutledge to file a separate concurring opinion in which Justices Black, Douglas and Murphy joined. They would have upheld the lower court's ruling that the provision was unconstitutional.

In another separate concurring opinion, Justice Frankfurter indicated his view that the case was not ripe for constitutional adjudication by the Supreme Court in that it did not present a "real contest." He could not "escape the conclusion that in a natural eagerness to elicit from this court a decision at the earliest possible moment, each side was at least unwittingly the ally

of the other."

Justice Reed's "opinion of the court" relied to a large extent on the legislative history of the section, particularly that part of the Senate debate wherein questions as to its application to the labor press were answered by Senator Taft, Republican of Ohio, one of the Taft-Hartley act sponsors. As noted in the Railway Age of June 14, 1947, page 1231, Labor, the organ of the railway labor organizations, was used as an example in much of that discussion. Justice Reed summed up the court's findings in part as follows:

One can find indications in the exchanges between participants in the debate that informed proponents and opponents thought that section 313, went so far as to forbid periodicals in the regular course of publication from taking part in pending elections where there was not segregated subscription, advertising or sales moneys adequate for its support. Of course, a periodical financed by a corporation or labor union for the purpose of advocating legislation advantageous to the sponsor or supporting candidates whose views are believed to coincide generally with those deemed advantageous to such organizations is on a different level from newspapers devoted solely to the dissemination of news, but the line separating the two classes is not clear.

"In the absence of definite statutory demarcation, the location of that line must await the full development of facts in individual cases. It is one thing to say that trade or labor union periodicals published regularly for members, stockholders or purchasers are allowable under section 313 and quite another to say that in connection with an election occasional pamphlets or dodgers or free copies widely scattered are forbidden. . . . It would require explicit words in an act to convince us that Congress intended to bar a trade journal, a house organ or a newspaper, published by a corporation, from expressing views on candidates or political proposals in the regular course of its publication. It is unduly stretching language to say that the members or stockholders are unwilling participants in such normal organizational activities, including the advocacy of governmental policies affecting their interests, and the support thereby of candidates thought to be favorable to their interests.

"It is our conclusion that this indictment charges only that the C.I.O. and its president published with union funds a regular periodical for the furtherance of its aims, that President Murray authorized the use of those funds for distribution of this issue in the regular course to those accustomed to receive copies of the periodical and that the issue with the [Murray] statement . . . violated section 313 of the Corrupt Practices Act.

"We are unwilling to say that Congress by its prohibition against corporations or labor organizations making an 'expenditure in connection with any election' of candidates for federal office intended to outlaw such a publication. We do not think section 313 reaches such a use of corporate or labor organization funds."

Justice Department Gives Up Grand Jury Probe of Car Builders

Upon the request of the Department of Justice, the United States District Court for the District of Columbia has dismissed a grand jury which has been investigating alleged anti-trust violations by seven freight car manufacturing companies. The department advised the court that it did not intend to ask for an indictment by the grand jury.

As reported in Railway Age of June 1947, page 1181, Attorney General Clark announced that he had authorized a grand jury investigation "into alleged restraints of trade and violations of the anti-trust laws by certain corporations and individuals in the railway freight car building industry." "This action," he said at the time, "is the result of an investigation by the Federal Bureau of Investigation of complaints that railway freight-car building companies have entered into agreements with each other to fix non-competitive prices for freight cars built by them for railroads and

other purchasers, and have allocated prospective railway freight car manufacturing business among the various companies in the industry according to percentage quotas assigned to the various members of the industry."

It also was asserted at the same time by J. T. Sonnett, then assistant attorney general in charge of the anti-trust division, that "the freight car building companies have suppressed competition among themselves and have retarded the growth of small car building companies and the development of the industry.'

The companies to which these allegations were applied included the American Car & Foundry Co., Pullman-Standard Car Manufacturing Company, Ralston Steel Car Company, Pressed Steel Car Company, Greenville Steel Car Company, Bethlehem Steel Company, and the Magor Car Corporation.

C. & O. Magazine Receives Award

The Chesapeake & Ohio's monthly employee magazine, Tracks, has received the highest award for excellence in the 1948 contest sponsored by the International Council of Industrial Editors. The award was made "in recognition of exceptional accomplishment of purpose, excellence of editorial content, and effectiveness of design."

A.A.R. Safety Section Convention -A Correction

The chairman of the committee on nontrain accidents of the Safety Section, Association of American Railroads, was incorrectly identified on page 75 of the Railway Age of June 19. The chairman of the committee is D. W. Naff, superintendent safety of the Norfolk & Western, and he presented the committee's report at the recent meeting of the section in San Francisco, Cal.

Class I Roads' Advertising Outlay Over \$22 Million in 1947

Advertising expenditures of Class I railroads last year totaled \$22,453,792 for all media, including the salaries and expenses of advertising departments, compared with \$19,624,511 in 1946, according to the Association of American Railroads. Included in the 1947 expenditures were \$4.372.023 for magazine advertising, \$6,346,470 for newspaper advertising, \$579,511 for radio advertising, \$10,230,062 for calendars and other advertising media, and \$925,726 for advertising department salaries and expenses. Among the seven roads which spent more than \$25,000 for radio advertising were the Chesapeake & Ohio, \$135,622; the Chicago & North Western, \$89,698; the New York Central, \$63,369; the Chicago, Milwaukee, St. Paul & Pacific, \$59,701; the Boston & Maine, \$54,508; the Union Pacific, \$29,-360; and the Northern Pacific, \$29,182.

zine and newspaper advertising expenditures of those railroads which spent \$25,000 or more in either

\$25,000 or more in	either category:	
Railroad	Magazine	Newspaper
Ale A. O. O. F	\$561,477	\$416,181
A. C. L	7,788	66,389
B. & O B. & M.	22,300	311,446
B. & M	5,781	66,364
C. of Ga.	5,701	65,431
C. & O. (a)	283,541	
C. & N. W.	18,439	552,176
C. & O. (a) C. & N. W. C, B. & O. C. M. St. P. & P.	125,357	102,493
C. M. St. P. & P.		289,947
C. R. I. & P	246,313	292,725
D. & R. G. W. (b)	66,203	159,261
Frie K. G. W. (b)	10,535	28,823
Erie G. N.	180,954	96,786
C M & O (-)	162,828	273,961
G. M. & O. (c)	774	27,259
I. C. L. I.	9,563	33,892
L. 1		70,209
L. & N.	4,141	149,102
M. & St. L	59,479	6,482
MKT.	30,215	85,827
M. P	9,840	28,266
N. Y. C	418,857	284,948
N. Y. N. H. & H	35,911	95,586
N. & W	225,404	58,945
N. P	45,709	113,566
MKT. M. P. N. Y. C. N. Y. N. H. & H. N. & W. N. P. P. R. R.	440,450	535,281
reie marquette (u) .	4,307	36,193
St. LS. F	11,162	31,655
S. A. L	3,434	77,231
Southern	116,897	142,176
S. P. (e)	167,008	322,928
T&NO	32,690	74,612
T. & P	46,399	106,293
U. P.	46,399 745,255	730,471
Wabash	53,155	100,960
W. P	16,908	81,926
	20,200	01,720

Includes the Pere Marquette, June to

December. Includes the Denver & Salt Lake, May to December.
Includes the Alton, June to December.
January-May, inclusive.
Pacific lines.

North Shore Strike Ends-Service Restored with Higher Fares

The Chicago, North Shore & Milwaukee-strikebound since March 27 -restored full freight and passenger operations at 4 a.m., June 30, after granting an increase in wages of 151/2 cents an hour, retroactive to December 1. Local motor bus service was restored immediately upon settlement of the 91day work stoppage but resumption of rail operations were withheld until receipt of authority was obtained from the Illinois Commerce Commission to increase commutation fares to cover the higher costs resulting from the new wage scale. Fares were increased as much as 68.8 per cent in some instances. The increase is on a temporary basis, applying to December 1. Meanwhile the commission will survey the situation to determine what permanent increase it will approve. This fare raise is in addition to increases of 10 per cent authorized in November, 1947.

The strike stemmed from a presidential emergency board report of January 28 which recommended a 151/2cent hourly wage increase retroactive to September 1. The company rejected the board's recommendations on the grounds that its operating deficit had been increasing and that it lacked resources with which to meet any further increases in operating costs. The company did state, however, the belief that it could meet the increase in wages if the state commission would approve an increase in intrastate commuter fares. Communities local to the North Shore indicated that they would support the carrier's efforts to obtain fare

increases, whereupon the dispute with the employees resolved itself mainly into a controversy over the retroactive date of the pay increase.

The wage increase applies to employees represented by the Amalga-mated Association of Street, Electric Railway & Motor Coach Employees, the Brotherhood of Railroad & Steamship Clerks, the Order of Railroad Telegraphers, and the Hotel & Restaurant Employees' International Alliance & Bartenders' International League of America.

Texas Intrastate Rates

Railroads operating within Texas have asked the Interstate Commerce Commission to investigate the refusal of the railroad commission of that state to permit intrastate freight rate increases in line with the interim increases on interstate rates which have been authorized thus far in Ex Parte 166.

President of Mexico **Welcomes Electrical Engineers**

The summer meeting of the American Institute of Electrical Engineers, held in Mexico, D. F., June 21-25, was officially inaugurated on June 21 by a reception for President Miguel Aleman of Mexico and cabinet members.

Oscar R. Enriguez, president of the summer 1948 general meeting, who acted as chairman, offered greetings to the visiting delegates. He said that June 21, 1948, is an historic date in the annals of Mexican engineering, since it would, without doubt, mark the beginning of activities that will influence industrial development on Aztec soil. He concluded by saying that the purpose of the meeting was not only to contribute to the advancement of engineering, but also to establish ties based on sincere friendship.

Blake D. Hull, president of the A.I.E.E., responded to the greetings. He said that Mexican progress in economics, government, art and general cultural advancement made in recent vears has been matched by other nations only a few times. People of the United States, he said, look toward a better understanding between the two nations, and hold to the opinion that the destiny of civilization rests upon the ability of the nations of the western world to reach accord and understanding.

ceremony was conducted by President Aleman, who declared the meeting to be officially in session.

The technical program included many papers of interest to railroad men, and two on specific railroad subjects. These are "The Increasing Uses for Electricity in Land Transportation," by Charles Kerr, Jr., of Westinghouse Electric Corporation, and "The Locomotive Traction Generator Comes of Age," by Richard Lamborn of General Electric Company. The paper by Mr.

Kerr outlines the present position of various types of motive power, and includes also urban and suburban transportation. The paper by Mr. Lamborn shows how Diesel-electric traction generators and motors must be designed and used, if the potentialities of such equipment are to be realized, involving a current situation affecting all oper-

Objectors to M.P. Revamp Plan Lose Case in Supreme Court

The Supreme Court of the United States has upheld lower-court decisions overruling objections to the pending Missouri Pacific reorganization plan which had been raised by holders of that road's 51/2 per cent secured serial gold bonds. The June 21 ruling was a 5-to-4 decision announced by Justice Jackson in Nos. 451-454, Andrew W. Comstock vs. Group Institutional Investors, etc., et al. and related cases. The dissent was written by Justice Murphy and subscribed to also by Justices Black, Douglas and Rutledge.

The bonds involved were secured by M.P. holdings of New Orleans, Texas & Mexico common stock; and the objectors protested against that phase of the reorganization plan which made provision for settlement of an M.P. claim for \$10,565,226 against the N.O.T.&M. for advances made to that subsidiary. They asked the courts to determine that the New Orleans was not indebted to the M.P., or, in the alternative, that all M.P. claims against the New Orleans be subordinated in the reorganization to the New Orleans capital stock interest. The M.P. reorganization plan is still pending before the Interstate Commerce Commission, the commission having got it back from the courts last year, at its own suggestion, for further consideration and "such revision as it may find to be appropri-

Much of the Supreme Court's majority opinion was a quotation from the statement of facts in the decision of the Circuit Court of Appeals for the Eighth Circuit which had affirmed the reorganization court's ruling against Mr. Comstock. The latter was identified as the owner of the serial bonds in principal amount of \$80,000, and as the representative also of other holders of "in excess of \$900,000." Joining in his objections to the plan was a committee representing another \$315,000 of the bonds. All of these holdings were equivalent to about 11½ per cent of the principal amount of the bonds outstanding.

Evidence summarized in the decision indicated that Mr. Comstock had purchased his bonds at "about 10 cents on the dollar," making it "apparent" to the Supreme Court that he "bought a grievance to exploit it and to reap the advantage of its rectification." Despite this evidence, the reorganization court had considered and rejected the claim on its "merits" because the M.P. reorganization plan was before it. The Sue p tl

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preme Court did not inquire "whether this discretion was wisely exercised," but went on to uphold the lower court decision as made.

The Comstock claims were based mainly on "wrongs which he alleges were done by the Missouri Pacific to the New Orleans to the detriment of his interest in the pledged stock of that company." He relied on the Supreme Court's decision in Taylor v. Standard Gas & Electric Co., 306 U.S. 307, which as the present opinion summarized it, "reformulated for application to reorganization cases a wholesome equity doctrine to the effect that a claim against a debtor subsidiary be disallowed or at least subordinated when the claimcorporation has wholly dominated and controlled the subsidiary and in the transactions creating the debt has breached its fiduciary duty and acted both to its own benefit and to the detriment of the debtor."

The doctrine was found not to apply to the present case because of the lower courts' findings that the M.P. claims against the New Orleans "were the outgrowth of complicated but legitimate good-faith business transactions, neither in design nor effect producing injury to the petitioner or the interests for which he speaks."

The dissenters would have required the subordination of \$4,056,009 of the P. claim to the claims of the "pledgees of the N.O.T.&M. stock," the holders of the M.P. serial bonds. This amount consisted of \$2,795,000 in M.P. advances to the New Orleans which the dissenters found were made "almost simultaneously" with the pay-ment of dividends in similar amounts on New Orleans common of which the M.P. was a large holder; and \$1,261,009 which the dissenters called an "inter-company adjustment" because it became a part of the M.P. claim against the New Orleans when the latter assumed a debt in that amount which had been owed by the International-Great Northern to the M.P.

Perishable Loss Prevention Schools Winning Praise

A joint committee of three agricultural representatives of the American Railway Development Association and three representatives of the Freight Claim Division of the Association of American Railroads has developed an educational program in the field of perishables which is designed to cover the United States. On the premise that freight claim and loss prevention personnel and agricultural development personnel of the railroads could do better work if they knew more about handling fruits and vegetables in rail service, the joint committee obtained the cooperation of Purdue University.

At Purdue, horticultural staff members have organized a one-week short course in perishable freight claim and loss prevention. Purdue professors, specialists from various railroads, the

A.A.R., and other universities made up the short-course staff. The first school was held in 1947. By popular demand another was held this past spring and arrangements are under way for the third annual school to be held at Purdue in March, 1949.

The Purdue short course covered such matters as: a Brief Study in Pathology as it Affects Perishable Fruits and Vegetables; Nature and Spread of Physiological, Bacterial, Virus and Fungus Diseases; Losses in Transit from Handling, Disease, Insects and Other Causes; Fruit and Vegetable Loss Demonstration with Clinic Materials from Terminal Markets; Physiological Breakdown in Fruits and Vegetables and Resulting Injury; Relation of Varieties and Maturity to Quality, Condition and Proper Handling; What's New in Containers and Carloading. Results of Refrigeration Experiments; and Freight Claim Analyses.

Interest in this course was so great that railroad personnel in other parts of the country urged that similar schools be set up in their areas. A course patterned after the one at Purdue has just been completed at Texas A. & M. (College Station, Tex.) and other similar short courses are understood to be in the planning stage.

A.A.R. Plans Road Tests Of Load-Compensating Brakes

An extensive program of road tests of recently developed "load compensating" air brakes designed to equalize braking power on both loaded and empty freight cars will be carried on under the direction of the Association of American Railroads, President William T. Faricy of the A.A.R. announced on June 25, following the regular monthly meeting of the association's board of directors in Washington, D. C.

The purpose of the road service tests, Mr. Faricy said, is to try out operation of the brakes under all conditions to determine whether or not they are suitable for universal use on the nation's railroads. Use of lightweight alloy steel cars in railroad freight service, he stated, has increased the variation between the weight of empty and loaded cars and stimulated a demand for brakes which will apply the requisite braking power regardless of the weight of the car and lading. The load compensating brakes are automatically controlled by springs which compress or expand and change the braking ratio as the load of the car varies.

Mr. Faricy said that the road tests, which are scheduled to begin on July 15, will be conducted for approximately 40 days on the Sang Hollow branch of the Pennsylvania between Johnstown, Pa., and Pittsburgh. The tests will be made with a special train of 150 new lightweight hopper cars of the Illinois Central equipped with the new load compensating brakes, and the train will be operated under varying conditions,

with its cars fully loaded with coal, partially loaded and empty, on both level stretches and mountain slopes. Five laboratory cars equipped with recording instruments will be distributed at intervals throughout the train to check brake performance.

Set Dates of 1949 Meeting, Mechanical Division, A.A.R.

The 1949 annual meeting of the Mechanical Division, Association of American Railroads, will be held at the Congress Hotel in Chicago on June 27, 28 and 29, it was announced at the Division's 1948 annual meeting in Chicago this week.

P.R.R. Motion Picture To Be Televised July 8

The Pennsylvania's documentary motion picture, "Clear Track Ahead," will be broadcast over television station WATV, Newark, N. J., on July 8, beginning at 6 p.m., E.D.S.T. The motion picture contains many scenes filmed along the P.R.R.'s electrified main line and contrasts them with the railroading of a century ago as portrayed by a full-scale operating replica of the "John Bull," New Jersey's first locomotive, together with one of the locomotive's passenger cars, built for the Camden & Amboy, now part of the Pennsylvania system.

Bulwinkle Says Law Won't Make Lincoln or Georgia Cases "Moot"

The recently-enacted Bulwinkle-Reed Act (S.110), in the opinion of its cosponsor, Representative Bulwinkle, Democrat of North Carolina, will not make the so-called Georgia case moot or prevent the Supreme Court of the United States from granting that state injunctive relief if the state is able to prove its charge that the railroads combined and conspired to fix rates by coercion and to discriminate against Georgia. Representative Bulwinkle also is of the opinion that the act likewise will not make the so-called Lincoln, Nebr., case moot and will not prevent the federal district court from granting the United States injunctive relief if the government can prove its charges in that proceeding.

Mr. Bulwinkle's comments appeared

Mr. Bulwinkle's comments appeared in a statement which he inserted in the Congressional Record in order that "the public should have a full, complete and correct knowledge of what the bill does" and "of what the bill does not

do."

The issue in the Georgia case, he said, is not whether mere participation in rate conferences by the railroads violates the anti-trust laws, but whether the railroads have used the rate conferences to fix rates by coercion and to discriminate against that state. In this connection, he went on to explain that the act (1) does not authorize the Interstate Commerce Commission to ap-

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prove rate conferences that are used in a conspiracy to fix rates by coercion or to discriminate against a region; (2) provides that the commission shall not approve any agreement unless the agreement gives to each party the free and unrestrained right to take independent action: (3) makes it impossible for the commission to approve any rate conference that is used to fix rates that discriminate against a region; and (4) provides that the commission cannot approve a rate conference unless it finds that the conference will promote the national transportation policy declared in the Interstate Commerce

"It should be assumed," Mr. Bulwinkle stated, "that even in the absence of these restrictions, the commission would not approve a rate conference that was a conspiracy to fix rates by coercion and to discriminate against a region. But Congress has not left that matter to the discretion of the commission; on the contrary, Congress has, by the terms of S.110, directed the commission not to approve a rate conference of that kind. Besides, such discrimination is prohibited by section 3 of the Interstate Commerce Act."

Freight Car Loadings

Loadings of revenue freight in the week ended June 26 totaled 888,582 cars, the Association of American Railroads announced on July 1. This was a decrease of 18,192 cars, or 2.0 per cent, below the preceding week, an increase of 42,441 cars, or 5.0 per cent, over the corresponding week last year, and an increase of 9,038 cars, or 1.0, over the equivalent 1946 week.

Loadings of revenue freight for the week ended June 19 totaled 906,774 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows: A.A.R

A.A.K., 10110	ows:			
	Freight	Car Load		
For the We	ek Ended	Saturday,	June 19	
District	1948	1947	1946	
Eastern	160,591	164,570	160,761	
Allegheny .	185,678	191,520	180,640	
Pocahontas .	75,930	73,199	71,122	
Southern	139,723	133,226	131,243	
Northwestern	135,387	135,824	118,416	
Cent. West.	137,870	135,925	128,851	
Southwest	71,595	67,572	67,390	
-	. 1,000		07,070	
Tot. West.				
Dist	344,852	338,781	314,657	
-	011,000		011,007	
Tot. All Rds.	906,774	901,296	858,423	
_				
Commodities:				
Gr. & gr.				
products .	54,387	51,260	45,326	
Livestock	10,801	12,186	12,310	
Coal	204,258	190,685	179,614	
Coke	14,850	14,212	12,142	
For, prods	48,840	47.967	48,658	
Ore	82,806	81.937	62,373	
Merch'd, l.c.l.	104,994	81,937 115,249	128,063	
Misc.	385,838	387.800	369,937	
June 19	906,774	901,296	858,423	
June 12	906,948	895,292	867,918	
June 5	821,213	900,747	830,128	
May 29	904,848	830,205	626,885	
May 22	879,158	890,605	571,473	
_				
Cumulative total,				
25 weeks 19		20,823,456	18,136,318	

In Canada.—Carloadings for the week ended June 19 totaled 80,739 cars as compared with 75,144 cars for the pre-

vious week and 81,428 cars for the corresponding week last year, according to the compilation of the Dominion

Bureau of Stat		Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canad	2 +	Luaded	Connections
June 19, 1948	a.	80,739	34,559
Tune 21, 1947		81,428	37,297
Cumulative total	for	01,720	31,291
Canada:			
June 19, 1948		1,837,331	878,329
June 21, 1947		1,792,632	928,097

Canada Puts Letter Mail In the Air, Experimentally

Effective July 1, Canada's postal service made effective a policy whereby all letters weighing not more than an ounce and bearing a four-cent postage stamp will be carried by air to any point in Canada "where delivery will be speeded" by use of the airways. This service will be given in addition to the regular air mail bearing air mail postage. In making the announcement of the opening of the "all-up" mail service, the Canadian postmaster-general stated that the new service will be operated on an experimental basis to discover whether it can be maintained at a reasonable cost and with the desired degree of efficiency.

Average Carload Revenues Of 1947 3rd-Quarter Traffic

The Bureau of Transport Economics and Statistics of the Interstate Commerce Commission has issued a table showing, on a one-per-cent-sample basis, the average freight revenue, by commodity classes, per 100 lb., per car, per ton-mile, and per car-mile for the third quarter of 1947. The compilation, Statement No. 4816 of the bureau, is another of the so-called waybill-study series, the data being some of those taken from the waybills submitted in response to the commission's September 6, 1946, order requiring Class I roads to file copies of audited waybills representing their carload terminations which are numbered "1" or with digits ending in "01."

ORGANIZATIONS

C. H. Buford, president of the Chicago, Milwaukee, St. Paul & Pacific, will be guest speaker at the 83rd regular meeting of the Mid-West Shippers Advisory Board, to be held on July 15 at the Schroeder Hotel in Milwaukee,

Perry M. Shoemaker, vice-president of the Delaware, Lackawanna & Western, in charge of operations, has been elected chairman of the General Managers' Association of New York, succeeding A. F. McIntyre of the Pennsylvania.

Membership of the association includes New York and New Jersey railroads serving the metropolitan area.

The annual golf outing and dinner of the Traffic Club of Pittsburgh (Pa.) will be held at the Pittsburgh Field Club on July 15.

Meetings & Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION — Lawrence Wilcox, Room 827, 80 E. Jackson Blyd., Chicago 4, Ill. Next meeting, September 20-22, 1948, Hotel Sherman, Chicago, Ill.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, American Brake Shoe Company, 6th floor, 109 N. Wabash Ave., Chicago 2, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo. Next meeting. October 26-28, 1948, Miami, Fla.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St. New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 20-22, 1948, Hitel Stevens, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—L. P. East. Pennsylvania Railroad.

N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—L. P. East, Pennsylvania Railroad, Richmond, Ind. Annual Meeting, April, 1949, Old Point Comfort, Va.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 15-17, 1949, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—HAITY Walker, D. & R. G. W. R. R., Room 204, Rio Grande Bldg., Denver, Colo.

AMERICAN RAILWAY MAGAZINE EDITORS ASSOCIATION.—HATTY Walker, D. & R. G. W. R. R., Room 204, Rio Grande Bldg., Denver, Colo.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, Tower Bldg., Washington 5, D. C. Annual meeting, October 13-14, 1948, Hotel Morrison, Chicago, Ill.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y. Annual meeting, November 28-December 3, 1948, New York, N. Y. Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill.

AMERICAN WOOD-PRESERVERS, ASSOCIATION,—H. L. Dawson, 1427 Eye St., N. W., Washington 5, D. C. Annual meeting April 26-28, 1949, St. Louis, Mo., ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati, Q. ASSOCIATION OF AMERICAN PAILROAD D'N.ING CAR OFFICERS.—W. F. Ziervogel, 605 S. Ranken Ave., St. Louis 3, Mo.

ASSOCIATION OF AMERICAN PAILROAD.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department—I. H. Aydelott, Vice-president, Transportation Bldg., Washington 6, D. C.

Operating Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.

Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Annual meeting, September 28-30, 1948, Hotel Antlers, Colorado Springs, Colo.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.

Medical and Surgical Section.—J. C. Cavisum.—J. C. Cavisu

5, Ill.
Freight Station Section.—W. E. Todd, 59
E. Van Buren St., Chicago 5, Ill.
Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Protective Section.—J. C. Caviston, 30
Vesey St., New York 7, N. Y.
Safety Section.—J. C. Caviston, 30 Vesey
St., New York 7, N. Y.

Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, III.
Construction and Maintenance Section. —
W. S. Lacher, 59 E. Van Buren St., Chicago 5, III. Annual meeting, March 15-17, 1949
Palmer House, Chicago, III.
Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, III. Annual meeting, September 8, 1948, Hotel Sherman, Chicago, III.

Van Buren St., ing. September 8, 1948, Hotel Statler, Chicago, Ill.
Signal Section.—R. H. C. Balliet, 30 Vesey St., New York 7, N. Y. Annual meeting, September 14-16, 1948, Hotel Statler, Buffalo, N. Y.
Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill. Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 9-10, 1948, Hotel Sherman. Chicago, Ill.

E. Van Buren St., Chicago 5, Ill. Annual meeting, September 9-10, 1948, Hotel Sherman, Chicago, Ill.

Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C. Freight Claim Division.—C. C. Beauprie, (Executve Vice-Chairman), 59 E. Van Buren St., Chicago 5, Ill.

Motor Transport Division.—Transportation Bldg., Washington 6, D. C.

Car Service Division.—Arthur H. Gass, Chairman, Transportation Bldg., Washington 6, D. C.

Charman, Transportation Bldg., Washington 6, D. C.
Finance Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.

tion Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, September 13-15, 1948, French Lick Springs Hotel, French Lick, Ind.

Traffic Department.—Walter J. Kelly, Traffic Officer. Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—E. A. Abbott, 1103 Cleveland St., Evanston, Ill.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—E. A. Abbott, 1103 Cleveland St., Evanston, Ill.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Gulf, Mobile & Ohio R. R., 340 W. Harrison St., Chicago 7, Ill.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—E. C. Gunther, Duff-Norton Mfg. Co., 122 S. Michigan Ave., Chicago 3, Ill. Exhibit in conjunction with meeting of the American Railway Bridge and Building Association, September 20-22, 1948, Hotel Stevens, Chicago. Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal 28, Que. Regular meetings second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Streamel 6516 Oxford Acc. Ct.

third Tuesday of each month, except June, July and August, Hotel DeSoto, St. Louis, Mo.

CAR Department Officers' Association.

—F. H. Stremmel, 6536 Oxford Ave., Chicago, 31, Ill. Annual meeting, September 20-23, 1948, Hotel Sherman, Chicago, III.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.

—W. E. Angier, chief A. A. R. clerk, C. B. & O. R. R., 547 W. Jackson Blvd., Chicago, III.

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CENTRAL RAILWAY CLUB OF BUFFALO.

R. E. Mann, 1840-42 Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y. CHICAGO LUNCHEON CLUB OF MILITARY RAILWAY SERVICE VETERANS.—Col. R. O. Jensen, Schiller Park, III. Luncheon, second Wednesday of each month, Chicago Traffic Club, Palmer House, Chicago, III.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May October and November, 29 W. 39th St., New Yok, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark. Annual meeting September 20-23, 1948, Hotel Sherman, Chicago, III.

MAINTENANCE OF WAY CLUB OF CHICAGO.

—C. R. Knowles, Room 2000, 105 W. Adams

September 20-23, 1948, Hotel Sherman, Carcago, Ill.

MAINTENANCE OF WAY CLUB OF CHICAGO.

—C. R. Knowles, Room 2000, 105 W. Adams St., Chicago 3, Ill. Regular meetings, fourth Monday of each month, October through April, inclusive, except December, when the third Monday, Hardings at the Fair.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y. Annual meeting, September 20-23, 1948, Hotel Sherman, Chicago, Ill.

Metropolitan Maintenance of Way Club.—John Vreeland, Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N. Y. Meets in October, D'ecember, February and April.

Military Railway Service Veterans.—
S. Thomson, 1061 W. Sheridan Road, Chicago 40, Ill. Annual reunion, September 25, 1948, Jefferson Hotel, St. Louis, Mo.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington 25, D. C. Annual meeting, November 15-18, 1948, Hotel Oglethorpe, Savannah, Ga.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—F. J. Armstrong, United States Radiator Corporation, 1500 United Artists Bldg., Detroit, Mich. Annual meeting, October 5, 1948, Jefferson Hotel, St. Louis, Mo.

States Radiator Corporation, 1900 United Artists Bldg., Detroit, Mich. Annual meeting, October 5, 1948, Jefferson Hotel, St. Louis, Mo.

National Industrial Traffic League—Edward F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C. Annual meeting, November 18-19, 1948, Hotel Pennsylvania, New York, N. Y.

National Railway Appliances Association.—R. B. Fisher, Suite 2414, 1 N. La Salle St., Chicago, Ill. Exhibit in connection with American Railway Engineering Association Convention, March 14-17, 1949, Coliseum, Chicago, Ill.

New England Railroad Club.— T. F. Dwyer, Jr. (Act. Sec'y.) 683 Atlantic Ave., Boston 11, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

New York Railroad Club.—D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y. Northwest Carmen's Association.—E. N. Myers, Minnesota Transfer Ry., 1434 Iowa Ave. W., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box 458, San Rafael, Calif, Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Calif.

Railway Business Association.—P. H. Middleton, First National Bank Bldg., Chi-

Calif.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago 3, Ill. Annual meeting and dinner November 19, 1948, Waldorf-Astoria Hotel, New York N. Y.

cago 3, Ill. Annual meeting and dinner November 19, 1948, Waldorf-Astoria Hotel, New York N. Y.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURER'S ASSOCIATION.—I. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago 6, Ill. Exhibit in conjunction with the meetings of the Electrical Sections of the Mechanical Division and the Engineering Division, A.A.R., September 8-10, 1948, Hotel Sherman, Chicago, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago 4, Ill. Annual meeting, September 20-23, 1948, Hotel Sherman, Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 60 E. 42nd St., New York 17, N. Y.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section, of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 610 Shell Bldg., St. Louis 3, Mo. Annual meeting, August 30-September 1, 1948, Greenbriar Hotel, White Sulphur Springs, W. Va.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise LaChance, Room

1948, Greenbriar Hotel, White Sulphur Springs, W. Va.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 20-22, 1948, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A. A. R. Signal Section.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Go.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS, P. J. Climer, (Acting Sec'y,) N. C. & St. L. Ry., Nashville, Tenn.

TORONTO RAILWAY CLUB.— D. L. Chambers, P. O. Box 8, Terminal "A", Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

Track Supply Association. — Lewis Thomas, Q. and C. Company, 59 E. Van Buren St., Chicago 5, Ill. Exhibit in conjunction with meeting of the Roadmasters and Maintenance of Way Association, September 20-22, 1948, Hotel Stevens, Chicago, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS. — Roy E. Collins, 225 Bidwell Ave., Westerleigh, Staten Island 2, N. Y.

Westerleigh, Staten Island 2, N. Y.

Westerleigh, Staten Island 2, N. Y.

UNITED ASSOCIATIONS OF RAILROAD VETERANS. — ROY E. Collins, 225 Bidwell Ave., Western Railway Club.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

ABANDONMENTS

Evansville Suburban & Newburgh.—Division 4 of the Interstate Commerce Commission has further extended from June 30 to July 15 the effective date of its order permitting this road to abandon its entire line between Evansville, Ind., and Boonville, 18 miles, subject to the modified condition that the applicant sell within 40 days the line or any portion thereof, including tracks and other facilities essential to continued operation.

Staten Island Rapid Transit.—Examiner A. G. Nye has recommended in a proposed report that Division 4 of the Interstate Commerce Commission permit this road, a subsidiary of the Baltimore & Ohio, to abandon its ferry between Tottenville, N. Y., and Perth Amboy, N. J., subject to the condition that within 40 days or earlier from the date of the commission's certificate, the applicant shall transfer to a successor on reasonable terms and for continued operation the Tottenville and Perth Amboy facilities and any other property now owned and used in the operation of the ferry, and transfer whatever interest it has in the slip and dock facilities presently leased from the city of Perth Amboy. The commission's certificate, he said, should become effective as of the date operations are commenced by a new operator, but not sooner than 40 days from the date of the certificate and upon the condition that evidence be furnished the commission that there has been a bona fide compliance with its decision. The commission's finding, he also recommended, should be made without prejudice to the applicant to renew its application after the expiration of one year from the date of the certificate in the event it does not become effective because of the failure or inability of the applicant to comply with the condition intended to assure operation of the ferry by another operator.

Examiner Nye said that while there is a public need for the ferry because of the inadequacy of the present bus service to handle even a "significant portion" of the passengers who would ordinarily patronize the ferry, it is also clear that the ferry cannot be operated by the applicant except with substantial deficits and an undue burden upon it and interstate commerce. He said that it is possible that arrangements can be made with another operator whereby the ferry will continue to operate without interruption. "This could be accomplished by transferring the units of property now in the ferry service or whatever portion of them that might be desired to a successor," he added. "On the showing by the applicant that the cost of recovering the fixed property will far exceed any possible salvage value and also because the boats have no salvage value, there should be no difficulty in arriving at a fair and reasonable price."

EQUIPMENT AND SUPPLIES

Domestic Equipment Orders Reported in June

Domestic orders for 65 Diesel-electric and 25 steam locomotives, 4,919 freight cars and 30 passenger cars were reported in *Railway Age* in June. The estimated cost of the locomotives is \$23,163,000 and the freight cars will cost approximately \$19,680,000. The passenger cars will cost about \$3,000,000. The table lists the orders in detail.

During the first six months of 1948, Railway Age has reported domestic orders for 520 Diesel-electric locomotives, plus 19 additional Diesel units, and 59 steam locomotives, costing an esti-

mated \$120,355,000; a total of 48,489 freight-train cars, the estimated cost of which is \$190,723,500; and 264 passenger-train cars, at an estimated cost of \$30,250,000. (The number of Dieselelectric locomotives reported ordered during the first half of this year, and the estimated cost figure, have been revised to include the rearrangement of an order by the Missouri-Kansas-Texas. See *Railway Age* of June 26, page 134, and January 17, page 60.)

FREIGHT CARS

The Delaware & Hudson is inquiring for 100 70-ton covered hopper cars.

The Clinchfield has ordered 500 50-ton hopper cars from the American Car & Foundry Co. The inquiry for this equipment was reported in *Railway Age* of June 5.

LOCOMOTIVES

The Atchison, Topeka & Santa Fe has ordered 10 1,000-hp. Diesel-electric switching locomotives from the Baldwin Locomotive Works.

The Union Railroad (Pittsburgh, Pa.) has ordered 7 1,500-hp. Diesel-electric transfer locomotives with 6-wheel trucks and 6 motors from the Baldwin Locomotive Works.

PASSENGER CARS

The Southern Pacific has ordered 78 stainless steel passenger-train cars from the Budd Company. Included in the

St. Louis Car

order are 30 all-room sleeping cars, 20 chair cars, 6 baggage-mail cars, 6 dining cars, 6 lounge cars, 5 dormitory cars and 5 coffee shop-lounge cars. This equipment, together with the 9 Diesel-electric locomotives recently ordered from the American Locomotive Company, will be used to make up 5 new "Sunset Limited" trains for daily service between New Orleans, La., and Los Angeles, Cal. (See Railway Age of May 29, page 57.) Delivery of the cars is expected to begin the latter part of next year.

SUPPLY TRADE

George A. Huggins, whose appointment as general manager of the Pullmon-Standard Car Manufacturing Company's car works plant at Chicago, was reported in Railway Age of June 5, attended the University of California and started his career with the Douglas Aircraft Corporation in 1928 as an assembly line employee. He advanced to director of tooling, and in 1942 was appointed manager of Douglas' plant at



George A. Huggins

Long Beach, Cal. His first contact with Pullman-Standard came at the beginning of World War II, when, as tooling director for Douglas, he assisted in plans for the opening of the Pullman-Standard aircraft division at Chicago. Immediately prior to joining Pullman-Standard, Mr. Huggins was manager of the Douglas plant at Santa Monica, Cal.

William J. Savoge, whose appointment as director of sales for the primary battery division of Thomas A. Edison, Inc., was announced in the Railway Age of May 29, was born in Waterbury, Conn., on April 29, 1896, and received his early education there. He joined the primary battery division of the Edison company as a tester in 1915 and successively advanced to foreman, service

		Locom	notives	
Date	Purchaser	No.	Type	Builder
June 5 June 19 June 19	McCloud River C. & O G. N.	1 25 5 2 1 2	1,500-hp. DE. sw. 2-6-6-2 6,000-hp. DE. frt. 3,000-hp. DE. pass. 4,500-hp. DE. frt. 3,000-hp. DE. frt.	Baldwin Baldwin Electro-Motive Electro-Motive Electro-Motive Electro-Motive
June 19 June 26 June 26	Minn., Northfield & S. MKT	5212252812*** *** *** *546452	1,500-hp. DE. pass. 2,000-hp. DE. trans. 4,000-hp. DE. pass. 4,500-hp. DE. frt. 3,000-hp. DE. frt. 3,000-hp. DE. frt. 1,000-hp. DE. frt. 1,000-hp. DE. sw. 1,500-hp. DE. sw. 4,000-hp. DE. sw. 4,000-hp. DE. sw. 4,000-hp. DE. sw. 1,000-hp. DE. sw. 1,000-hp. DE. sw.	Electro-Motive Baldwin American Electro-Motive Electro-Motive Electro-Motive Electro-Motive Baldwin Baldwin Baldwin American American
		Freigh	nt Cars	
June 19 June 19	N. & W S. A. L	1,000 500 50	70-ton Hopper 50-ton Box 50-ton Gondola	Virginia Bridge Pullman-Standard Pressed Steel
June 26 June 26	A.T. & S.F C. & N.W	750 50	50-ton-Box 70-ton Gondola	R. R. Shops Pressed Steel
June 26 June 26	L. & A	19 100 1,000	70-ton Cov. Hopper 70-ton Cov. Hopper 70-ton Hopper	General American General American Pressed Steel
June 26	W. M	1,000 200 50 200	70-ton Hopper 50-ton Box 70-ton Gondola 70-ton Gondola	R. R. Shops Pressed Steel Pressed Steel Greenville

Passenger Cars

M.-U. car

June 5 N.Y.C.

^{*}For the International-Great Northern.
**For the St. Louis, Brownsville & Mexico.

engineer, sales engineer and southeastern sales manager. In July, 1941, he was appointed eastern sales manager, serving in that capacity until his recent



William J. Savage

appointment. In his new position, Mr. Savage will coordinate all divisional sales activities, including general direction of the home district.

Robert Aldag, Jr., whose promotion to manager of the sales engineering department, railroad division, Fairbanks, Morse & Co., at Chicago, was reported in Railway Age of June 12, is a graduate of Purdue University, where he specialized in railway mechanical engi-



Robert Aldag, Jr.

neering. He began his railroad career with the Erie and later joined the Chicago, Burlington & Quincy, for which he supervised the operation and maintenance of Diesel locomotives. Mr. Aldag joined Fairbanks, Morse in 1946 as sales engineer, which post he held at the time of his recent appointment.

Peter F. Rossmann, formerly assistant to the president of the Curtiss-Wright Corporation, has been elected president of the Symington-Gould Corporation to succeed J. A. Sauer, who has retired after 40 years' service with the Symington interests. Mr. Sauer will continue

as a member of the board of directors and as chairman of the finance committee.

The general offices of the General Steel Costings Corporation have been transferred from Eddystone, Pa., to Granite City, Ill. The headquarters of the treasury and purchasing departments will remain at Eddystone.

J. Carl Bode, formerly operating manager, has been elected president of the National Carbide Corporation to succeed L. A. Hull, who has been elected chairman of the board.

Leonard C. Barr, Maurice A. Enright and William J. Kane have been elected vice-presidents of the Morton-Gregory Corporation.

Plans for the construction of a complete new manufacturing plant and head-quarters offices for the Lincoln Electric Company at East 178th street and St. Clair avenue, Cleveland, Ohio, have been announced. The new facilities, which will represent an investment of more than \$10,000,000, will completely replace the present plant at 12818 Coit road, Cleveland. Preliminary studies for the new plant are being developed by engineers of the Austin Company.

Horvey W. Smith has joined the engineering staff of the Lenkurt Electric Compony. Mr. Smith will be in full charge of the design and construction of transformers both for carrier application and custom manufacture.

Edwin A. Wert has been appointed vice-president in charge of engineering of the Ric-wil Company.

F. E. Rolston has been assigned by the Deorborn Chemical Company to the territory previously covered by Tom Holcombe. Mr. Rolston will cover Louisiana, Arkansas and part of eastern Texas. He will be in charge of the sale of all the firm's products in that territory and will temporarily be located at the Shreveport, La., office.

C. B. Murphy has been appointed to represent the Limo-Hamilton Corporation in the sale of Diesel engines and power engineering equipment in the southwest. Mr. Murphy's headquarters will be at 3130 Daniels street, Dallas, Texas.

The organization of a sixth region for the field organization of the Allis-Cholmers Manufacturing Company's general machinery division under William Arthur, formerly Philadelphia, Pa., district office manager, was announced recently. The new area, designated as the mid-Atlantic region, with headquarters in Philadelphia, will embrace territory now covered by the Philadelphia, Wilkes-Barre, Baltimore, York, Richmond and Charleston offices. The York and Charleston offices, managed by G. E. Conn and R. L. Holsted, respectively, formerly branch offices, become district

offices under the regional plan. Fronk Feyler, manager of the Cincinnati, Ohio, district office since 1944, succeeds Mr. Arthur as Philadelphia district manager, and W. F. Doly, manager of the power section of the company's steam turbine department since 1943, succeeds Mr. Feyler.

The Ortner Compony, the formation of which was announced in Railway Age of June 26, has offices in the Terrace Plaza building, Cincinnati, Ohio. The new firm, which has purchased all the assets of the Railway Accessories Company, will engage in the purchase, repair, conversion and sale of all types of railroad equipment and also will act as a sales agency for a number of railroad supply manufacturers. J. L. Ortner, president of the new firm, was born in Bennington, N. Y., on November 29, 1893, and entered railroad ser-



J. L. Ortner

vice in 1911 as an apprentice with the Erie. He held the following positions, successively, until 1933: car inspector, travelling car inspector, superintendent of scrap and reclamation (stores department) and superintendent of shops. Mr. Ortner resigned from the Erie to accept the vice-presidency of Railway Accessories. Other officers of the new company are: J. L. Ortner, Jr., vice-president; R. C. Ortner, secretary and treasurer; and L. J. Ortner, eastern representative, with headquarters in Buffalo, N. Y.

Norman C. Naylor, vice-president and a director of the American Locomotive Company, with headquarters at Chicago, retired on June 30 after 50 years of service with that firm. He was subsequently elected a vice-president of the Union Asbestos & Rubber Co. at Chicago. Mr. Naylor continues as a director of Alco.

The Northwest Engineering Company has appointed F. A. Stoughton, 487 Mc-Cully street, Pittsburgh 16, Pa., as district sales manager in the Pittsburgh area.

CONSTRUCTION

Atlantic Coast Line.—This company has applied to the Interstate Commerce Commission for authority to construct a 1.9-mile branch from Four Holes, S. C. to Harleyville.

Chesapeake & Ohio.—This road has asked Interstate Commerce Commission authority to construct an extension to its so-called Dawkins subdivision, extending from a point near Carver, Ky., to a point on Spring Fork of Quicksand creek, approximately 15.7 miles. The applicant told the commission that the proposed extension will permit the development of a large area containing bituminous coal deposits.

Detroit, Toledo & Ironton.—This company is constructing a concrete loading dock and office, with trackage to serve it, in Detroit, Mich., at an estimated cost of \$10,000. The Charlson Company of Wyandotte, Mich., is the general contractor, and Armond Cassil, Inc., of Detroit, Mich., is the tracklaying contractor.

Duluth, Missabe & Iron Range.—Acting upon this road's request, Division 4 of the Interstate Commerce Commission has further extended from July 1 to September 1 the time within which it will be required to complete the construction of a 28-mile extension to its so-called Wales branch from a point near Whyte, Minn.

Elgin, Joliet & Eostern.—This company has awarded a \$40,714 contract to the Lamson Corporation of Syracuse, N. Y., for the construction of a pneumatic tube system in its yard at East Joliet, Ill. The R. W. Neill Company of Chicago has received a contract amounting to \$27,243 for the construction of two separate paging and two-way communication systems in the yard at East Joliet.

The road recently authorized the following construction projects to be completed by company forces, the estimated costs of which are shown in parentheses: Install automatic block signals on eastward and westward main tracks, between Frankfort, Ill., and Matteson (\$24,940); install 7,389 ft. of track—including 23 turnouts, two railroad crossings, and two double slip switches-and retire 4,223 ft. of track -including 16 turnouts-at new blast furnaces No. 11 and No. 12, at South Chicago, Ill. (\$74,126); install various facilities at Kirk Yard, Ind. (\$22,921); complete telephone dispatching system and messenger telephone circuit and retire old telegraph facilities over the entire system (\$93,154); and relocate Diesel terminal facilities at Gary Mill yard, Gary, Ind. (\$42,649).

New York Central. — Acting upon a request of the applicants, Division 4

of the Interstate Commerce Commission has extended from July 1 to January 1, 1949, the time within which this road's lessor, the Cleveland, Cincinnati, Chicago & St. Louis, will be required to complete the construction of a 2.5-mile branch line from Pana, Ill., to a connection with the Illinois Central (see *Railway Age* of December 13, 1947, page 78)

Oregon Pacific & Eastern—Division 4 of the Interstate Commerce Commission has authorized this company to construct and operate a branch from its existing line at Walden, Ore., to a point to be known as Abrams, approximately 10.3 miles. The line will be used to serve logging and lumbering industries. Cost of constructing the line is estimated at \$520,617.

Point Comfort & Northern.-This road has requested Interstate Commerce Commission authority to construct and operate a line extending from a connection with the St. Louis, Brownsville & Mexico at Lolita, Tex., to a point near Point Comfort, approximately 12 miles. The line will serve a new \$20,000,000 plant to be constructed in the vicinity of Point Comfort by the Aluminum Company of America, which, as reported in Railway Age of June 5, page 86, has applied to the commission for authority to acquire, through stock ownership, control of the carrier. According to the applicant, the estimated cost of constructing the line will be \$736,205, plus \$10,000 for purchase of the right-of-way.

FINANCIAL

Atchison, Topeka & Santa Fe.—Annual Report.—Operating revenues of this system last year totaled \$462,699,237, compared with \$411,604,239 in 1946. Operating expenses amounted to \$339,217,606, compared with \$313,925,735. Net income was \$47,743,744, compared with \$39,015,177. Current assets at the end of the year were \$234,078,617, compared with \$212,054,114. Current liabilities were \$98,795,808, compared with \$86,087,510. Funded debt was \$227,271,758, compared with \$229,131,234.

Gross earnings of this system last year totaled \$318,585,919, compared with \$292,495,828 in 1946. Working expenses, including taxes, amounted to \$295,693,730, compared with \$271,652,778. Fixed charges were \$15,787,174, compared with \$18,488,113. Net income was \$31,893,942, compared with \$25,134,731.

Canadian National.—Annual Report.— Operating revenues of this system last year amounted to \$438,197,980, compared with \$400,586,025 in 1946. Operating expenses totaled \$397,122,607, compared with \$357,236,718. The net deficit was \$15,885,194, compared with a net deficit of \$8,961,570. Current assets at the end of the year were \$123,343,744, compared with \$119,275,895. Current liabilities were \$81,650,562, compared with \$73,578,454. Long term debt was \$582,895,761, compared with \$530,422,997.

Central of Georgia.—Reorganization.— The reorganization of this company became effective on July 1. The main provisions of the plan were outlined in Railway Age of July 21, 1945, page 113, and a subsequent modification was reported in the issue of November 24, 1945, page 879.

Central of Georgia.—Reorganization.— Division 4 of the Interstate Commerce Commission has issued a second supplemental order in the Finance Docket No. 12950 proceeding in which it has granted the necessary authorizations to enable this road's reorganization managers to carry out a plan of reorganization under section 77 of the Bankruptcy Act The order authorizes the acquisition of the properties of the reorganized company and its lessors, the Augusta & Savannah and Chattahoochee & Gulf, the issuance and assumption of liability of securities, including scrip certificates, and the issuance of voting-trust certificates and scrip certificates by voting trustees. The transactions presently contemplated do not include immediate acquisition of the properties of the South Western, the proposed inclusion of which is in issue in pending litiga-

Central of New Jersey.—Reorganization.
—Acting upon this road's request, the Interstate Commerce Commission has set back to September 21 the hearing it had scheduled for June 29 with respect to its reorganization under section 77 of the Bankruptcy Act. Meanwhile, as reported in Railway Age of June 26, page 136, the C. of N.J. has announced that negotiations have been under way to work out an adjustment plan to be presented to security holders and the commission for approval under the so-called Mahaffie Act.

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Denver & Rio Gronde Western.—Operating Agreement.—Division 4 of the Interstate Commerce Commission has approved a new agreement under which this road will continue to use certain tracks and terminal facilities, including the Union passenger station, of the Ogden, Utah, Railway & Depot Co. The D. & R.G.W., which shares the use of the facilities with the Union Pacific and Southern Pacific, presently uses the station for the operation of one inbound and one outbound passenger train daily

Duluth, South Shore & Atlantic.—Reorganization.—Division 4 of the Interstate Commerce Commission has fixed maximum limits of final allowances for services and expenses during the period from January 2, 1937, to and including

September 30, 1947, in connection with the reorganization proceedings of this road under section 77 of the Bank-ruptcy Act. The commission allowed \$199,589 on claims amounting to \$354,-787. Among the larger allowances fixed were the following: Hunt, Hill & Betts and P. N. Todhunter, as counsel for a protective committee representing the debtor's first mortgage 5 per cent bonds, \$94,889, on a claim of \$209,042, and C. H. Fox, as secretary of that committee, \$12,000, on a claim of \$25,000; Ehrich, Royal, Wheeler & Holland, as counsel for another protective committee representing the debtor's first mortgage 5 per cent bonds, \$23,054, on a claim of \$30,054; Rathbone, Perry, Kelley & Drye, as principal counsel for the Central Hanover Bank & Trust Co., trustee under the first mortgage of the debtor, \$15,-004, on a claim of a like amount; and G. A. Youngquist, as counsel for the debtor corporations, \$13,640, on a claim of \$18,640.

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Hoboken Manufacturers. - Reorganization.-The Interstate Commerce Commission has dismissed a petition filed October 25, 1946, by the Hoboken Railroad, Warehouse & Steamship Connecting Co. for a finding under section 77 of the Bankruptcy Act and section 1 (18) of the Interstate Commerce Act that the forfeiture of a June 19, 1906, lease by the petitioner to this road will be compatible with the public interest. The commission's order noted that the federal court in which the reorganization proceeding is pending has issued approving stipulations and agreements providing for the with-drawal and settlement of claims and eliminating the necessity for any reorganization plan. The court order, it said, also provided for the termination of the operation of the debtor's road by the trustee, the transfer of the property to and resumption of operation of same by the debtors. The commission's order also noted that the trustee filed with the court a report of distribution of the assets of the debtor's estate, as required by the court, thereby effecting his discharge as trustee, cancellation of his bond, and dismissal of the proceedings, subject to the court's reservation to make such additional orders as may be necessary.

Reading. — Dividend. — This company has declared a dividend of 50 cents a share on the common stock, payable on August 12, to stockholders of record on July 15. The previous payment on this issue was a quarterly dividend of 25 cents a share on May 14.

Hoosac Tunnel & Wilmington.—Bonds—Division 4 of the Interstate Commerce Commission has authorized to extend from July 1 to July 1, 1963, the maturity date of \$27,500 of 6 per cent first mortgage coupon bonds, in order that it may apply its available cash toward the purchase of a Diesel-electric loco-

motive costing approximately \$47,500, and to perform general road work. All the bonds are owned by S. M. Pinsly, president and principal stockholder of the road, who consented to the extension.

New York, New Haven & Hartford.-Boston Terminal Reorganization.-Division 4 of the Interstate Commerce Commission has fixed maximum limits of final allowances for services and expenses incurred during the period from November 3, 1939, through December 31, 1947, in connection with the reorganization proceedings of the Boston Terminal under section 77 of the Bankruptcy Act. The commission allowed \$159,292 on claims amounting to \$361,-168. The allowances fixed were as follows: J. N. Clark, as counsel for the debtor's trustee, \$125,000, on a claim of \$320,375; Brickley, Sears & Cole, as counsel for the debtor, \$29,878, on a claim of \$36,378; and J. C. Kiley and E. L. Gates, as independent real estate and tax experts emloyed by the debtor's counsel, \$2,187 and \$2,226, respectively, on claims of like amounts.

St. Johnsbury & Lamoille County.-Acquisition.-This new company has applied to the Interstate Commerce Commission for authority to acquire from the Boston & Maine for \$225,000 that portion of the St. Johnsbury & Lake Champlain extending from St. Johnsbury, Vt., to Swanton, approximately 96.2 miles, in addition to approximately 14.5 miles of passing, switching and yard tracks. The applicant told the commission that the B. & M. seeks to liquidate its interest in the line. It said that the remaining portion of the line, approximately 22 miles, will continue to be operated under lease by the Maine Central. The applicant plans to finance the acquisition through the issuance of \$225,000 in notes. It also seeks authority to issue 1,000 shares of common stock, par value \$100 per share, to be used for working capital.

St. Louis Southwestern-Southern Pacific.— Note.-Division 4 of the Interstate Commerce Commission has authorized this road to reset the dates for payment of the installments due January 1, 1954, to January 1, 1970, inclusive, on a note held by the Southern Pacific, so that those maturities, now aggregating \$16,-482,250, will be represented by 32 semiannual maturities of \$500,000 each, due on January 1, 1949, to July 1, 1964, inclusive, and one maturity of \$482,250, to be due January 1, 1965. The interest rate also will be reduced from 3 per cent to 21/2 per cent per annum. The transaction is expected to amount in a total saving of \$3,192,726 in interest charges.

New Securities

Division 4 of the Interstate Commerce Commission has authorized:

Chicago, Rock Island & Pacific.—To assume liability for \$4,590,000 of series

A equipment trust certificates, the proceeds of which will be applied toward the purchase of equipment estimated to cost \$5,740,090, as outlined in Railway Age of May 22, page 62. The equipment includes 12 sleeping cars and 1,000 50-ton box cars. The certificates will be dated July 1 and will mature in 30 semi-annual installments of \$153,000, starting January 1, 1949. The report also approves a selling price of 99,4103 with a 2½ per cent interest rate, the bid of Halsey, Stuart & Co., on which basis the average annual cost will be approximately 2.34 per cent. The certificates were reoffered to the public at prices yielding from 1.2 per cent to 2.575 per cent, according to maturity.

approximately 2.34 per cent. The certificates were reoffered to the public at prices yielding from 1.2 per cent to 2.575 per cent, according to maturity.
Fordyce & Princeton.—To issue \$27,150 of common stock, consisting of 1,086 shares of \$25 par value to be exchanged for an equal number of \$100 par value shares. According to the commission's report, the balance sheet of the applicant on March 31 showed a deficit of \$73,070 in the surplus account, due largely to abandonments. In order to bring the capitalization more nearly in line with the value of its physical assets, the applicant proposed to reduce the par value of its outstanding stock from \$108,600 to \$27,150 by changing the par value. The amount of \$81,450, which represents the difference between the par value of the presently outstanding stock and the par value of the proposed stock, will be charged to the common capital stock account, with a like amount to be credited to the surplus account.

Kansas City Southern.—To issue and sell \$14,000,000 of first mortgage 20-year 35% per cent series B bonds, the proceeds to be applied toward the purchase of a like amount of Louisiana & Arkansas first mortgage 4 per cent series D bonds, now pledged as collateral for \$14,000,000 of L. & A. promissory notes due in 1949. The commission's order also authorized the L. & A., a wholly-owned subsidiary of the K.C.S., to sell to that company at par and accrued interest the \$14,000,000 of series D bonds and to apply the proceeds from that sale toward the prepayment of the notes. After completion of the proposed refunding, according to the commission, the only funded debt of the K.C.S. and its system, other than equipment obligations and \$1,131,000 of bank notes, will be the \$14,000,000 of series B bonds and \$40,000,000 of outstanding first mortgage 5 per cent series A bonds.

series A bonds.

The series B bonds will be dated June 1 and will mature on June 1, 1968. The report also approves a selling price of 99.40, the bid of the First Boston Corporation and associates, on which basis the average annual cost will be approximately 3.67 per cent. The bonds will be redeemable at the option of the K.C.S. as a whole or in part at prices ranging from 103% to and including May 31, 1950, decreasing gradually each two years thereafter to 100% if redeemed to and including May 31, 1967, and thereafter without premium.

They also will be redeemable through the sinking fund at prices ranging from 101¾ to and including May 31, 1950, decreasing gradually each two years thereafter to 100¼ to and including May 31, 1967, and thereafter

without premium. The bonds were reoffered to the public at 100.35.

Average Prices Stocks and Bonds

	June 29	Last	
Average price of 20			
representative railway			
stocks	54.78	54.71	46.70
Average price of 20			
representative railway			
bonds	91.29	91.03	88.27

Dividends Declared

Augusta & Savannah.—\$2.50, semi-annually, payable July 1 to holders of record June 15.

Belt Stock Yards.—common, 50c, quarterly; 6% preferred, 75c, quarterly, both payable July 1 to holders of record June 19.

Camden & Burlington County.—75c, semi-annually, payable July 1 to holders of record June 15.

Carolina, Clinchfield & Ohio,—\$1.25, quarterly, payable July 20 to holders of record July 9.

Delaware \$1.00 common for the payable of the payable July 9.

June 15.
Carolina, Clinchfield & Ohio,—\$1.25, quarterly, payable July 20 to holders of record July 9.
Delaware. — \$1.00, semi-annually, payable July 1 to holders of record June 15.
Illinois Terminal.—18c, quarterly, payable August 1 to holders of record July 12.
International of Central America. — 5% preferred (accum.), \$1.25, payable July 15 to holders of record July 7.
Lykens Valley & Coal.—40c, semi-annually, payable July 1 to holders of record June 15.
Mill Creek & Mine Hill Navigation. — \$1.25, semi-annually, payable July 8 to holders of record June 25.
Mount Carbon & Port Carbon.—\$1.25, semi-annually, payable July 8 to holders of record June 25.
Norfolk & Western.—common, 75c quarterly, payable September 10 to holders of record August 11; 4% adjustment preferred, 25c, quarterly, payable August 10 to holders of record July 4.
Philadelphia & Trenton.—\$2.50, quarterly, payable July 10 to holders of record July 1.
Piedmont & Northern.—75c, payable July 20 to holders of record July 6.
Pittsburgh, Cincinnati, Chicago & St. Louis.—\$2.50, semi-annually, payable July 20 to holders of record July 10.
Reading.—increased, 50c, payable August 12 to holders of record July 15.
Richmond, Fredericksburg & Potomac. —common, \$3.00, semi-annually; voting common, \$3.00, semi-annually; voting common, \$3.00, semi-annually; all payable June 30 to holders of record July 24.
Schuylkill Valley & Navigation.—\$1.25, semi-annually, payable Jule 30 to holders of record June 24.
Schuylkill Valley & Navigation.—\$1.25, semi-annually, payable July 1 to holders of record June 25.
West Jersey & Seashore.—\$1.50, semi-annually, payable July 1 to holders of record June 25.
Western New York & Pennsylvania. —common, \$1.50, semi-annually; 5% preferred, \$1.25, semi-annually, payable August 2 to holders of record June 30.
Wheeling & Lake Erie.—4% prior lien, \$1.00, quarterly, payable August 2 to holders of record July 23.

superintendent's office at New Haven in 1904. After serving in various other capacities he became chief clerk to general manager in 1918 and in 1928 he was appointed division superintendent of the Old Colony division at Taunton, Mass., transferring to the Providence division at Providence, R. I., two years



Stanley F. Mackay

later. In 1934 Mr. Mackay was appointed superintendent of transportation at New Haven, becoming general superintendent of transportation a year later. He was appointed manager of transportation in 1944 and two years later be became general manager, which position he held until until his recent appointment.

John B. Helwig, whose appointment as assistant vice-president of the Minneapolis & St. Louis, with headquarters at Los Angeles, Cal., was reported in Railway Age of June 12, was born on September 30, 1888, at Cincinnati, Ohio, and entered railroad service in



John B. Helwig

that city in 1905 as a stenographer in the general passenger department of the Cleveland, Cincinnati, Chicago & St. Louis. Mr. Helwig subsequently held various positions with several roads in Cincinnati, and in 1911 joined the traffic department of the M. & St.

L. as contracting agent. He became traveling agent in 1915 and general agent in 1920, and in 1925 was transferred to Los Angeles. Mr. Helwig advanced to assistant general freight agent in 1935, to assistant traffic manager in 1938 and to western traffic manager in the following year. He was holding the latter post at the time of his recent appointment.

Hiram H. Smith, assistant to vice-president of the Railway Express Agency at San Francisco, Cal., will retire on July 1, after 42 years of continuous service. A native of La Moille, Ill., Mr. Smith began his express career as a clerk-stenographer at Des Moines, Iowa, in January, 1906. He later served as superintendent at Portland, Ore., and Seattle, Wash., and in 1936 became western traffic manager at San Francisco. On June 1, 1945, Mr. Smith was appointed general manager of the Midwest departments at Kansas City, Mo., and on January 1, 1948, he was named assistant to vice-president.

Fred Carpi, whose appointment as vicepresident in charge of traffic of the Pennsylvania at Philadelphia, Pa., was reported in the Railway Age of June 19, was born at Charleroi, Pa., in May, 1900. Educated in the public and private schools, he began work for the Pennsylvania as a clerk in the office of the agent at Donora, Pa., and was appointed chief rate clerk in the office of the general freight agent at Pittsburgh, Pa., in April, 1927. He became division freight agent at Wheeling, W. Va., in May, 1929; assistant general freight agent at Philadelphia in January, 1931; traffic engineer at Philadelphia in August, 1931; assistant general freight agent at Philadelphia in June, 1932; general freight agent at Philadelphia in November, 1934, and assistant to general traffic manager in June, 1940. Mr. Carpi was appointed assistant general traffic manager at Philadelphia in May, 1943, which position he held until his recent promotion.

Charles E. Johnston, chairman of the Western Association of Railway Executives, with headquarters at Chicago, retired from that position on June 30. Mr. Johnston was president of the Kansas City Southern from 1928 to 1938, inclusive, and had served as association chairman since 1939.

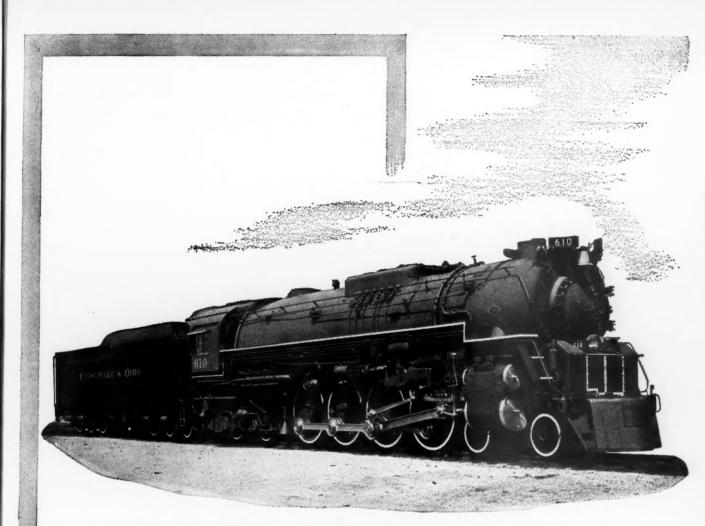
John C. Rill, whose election as president of Fruit Growers Express Co. at Washington, D. C., was reported in the Railway Age of June 19, has also been elected president of the Western Fruit Express Co. and Burlington Refrigerator Express Co. Mr. Rill was born at Hampstead, Md., on March 31, 1889, and entered railroad service in 1910 as a clerk on the Pennsylvania at Bowie, Md. He subsequently served that road as assistant yardmaster and assistant trainmaster at various points until he entered military service in 1917

RAILWAY OFFICERS

EXECUTIVE

Merrel P. Callaway, trustee of the Central of Georgia until its reorganization became effective on July 1, has been elected chairman of the board of the new company. Marion J. Wise, executive vice-president since October 21, 1947, has been elected president.

Stanley F. Mackay, whose appointment as assistant vice-president of the New York zone of the New York, New Haven & Hartford at New York, was reported in Railway Age of June 12, was born at Meriden, Conn., on July 20, 1888. He began his service with the New Haven as clerk in the general



C & O's NEW 4-8-4's

Class J-3 A

Service: Passenger

Road Nos.: 610-614

Tractive Force, with Booster: 81,800 lb

Cylinders: 271/2" x 30"

Drivers, Diameter: 72"*

Weight on Drivers: 282,400 lb

Weight on Front Truck: 81,600 lb

Weight on Trailing Truck: 115,400 lb

Total Weight of Engine: 479,400 lb

Fuel: Soft Coal

Grate Area: 100 sq ft

Steam Pressure: 255 lb

Tender Capacity: 21,500 gal

25 tons

* Can take 74" drivers.



DIVISIONS: Lima, Ohio — Lima Locomotive Works Division; Lima Shovel and Crane Division. Hamilton, Ohio — Hooven, Owens, Rentschler Co.; Niles Tool Works Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shovels; Niles heavy machine tools; Hamilton diesel and steam engines; Hamilton heavy metal stamping presses; Hamilton-Kruse automatic can-making machinery; Special heavy machinery; Heavy iron castings; Weldments.

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with the U. S. Army Engineer Corps, becoming engineer in charge of construction and operation with the First Army, A.E.F. Following World War I, he re-entered the service of the P.R.R. as assistant trainmaster. Successive advances in the operating department brought him to the position of general manager of the Western region at Chicago in 1931. He became



John C. Rill

chief of freight transportation of the P.R.R. at Philadelphia, Pa., in 1935, from which position he resigned to accept the presidency of the three refrigerator car companies. Mr. Rill has also served for a number of years as a member of the general committee of the Operating-Transportation division of the Association of American Railroads.

A. F. Swinburne, assistant to chairman of the Car Service Division of the Association of American Railroads, at Washington, D. C., has been promoted to executive assistant of the division. Mr. Swinburne was born at



A. F. Swinburne

Atlantic City, N. J., and attended George Washington University in Washington, D. C. He has been with the Car Service Division since 1921 in various capacities. During 1938 he was car service agent

at Buffalo, N. Y., returning to Washington, D. C., the following year to become chief clerk of the division. From July, 1940, to December, 1941, he was furloughed from the A.A.R. to assist Ralph Budd, president of the Chicago, Burlington & Quincy, who was then transportation commissioner of the former Advisory Commission to the Council of National Defense. In September, 1942, Mr. Swinburne was appointed assistant to the chairman of the Car Service division, which position he held until his present appointment.

Due to a typographical error in Railway Age of June 5, page 90, the birthdate of Fred H. Shoffer, newly appointed vice-president in charge of operations of the St. Louis-San Francisco, was erroneously reported as 1822. Mr. Shaffer was born on September 30, 1882.

Larry H. Dugan, whose election as vice-president of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Seattle, Wash., was reported in Railway Age of June 19, was born on November 21, 1911, at Perry, Iowa. Mr. Dugan received his higher education at Drake Univer-



Larry H. Dugan

sity, and entered railroad service with the Milwaukee in 1939 as chief clerk to general counsel. He remained in the latter position until 1941, when he was advanced to assistant general counsel, the post he held at the time of his recent election as vice-president.

FINANCIAL, LEGAL and ACCOUNTING

A. O. Gibson, secretary and assistant treasurer of the Chicago, Rock Island & Pacific, at Chicago, has been elected secretary and treasurer, succeeding Carl Nyquist, who has retired as vice-president and treasurer.

J. R. Borrett, auditor of freight accounts of the St. Louis Southwestern, with headquarters at St. Louis, Mo., has retired after 43 years of service with the road.

E. H. Everton, assistant superintendent of insurance of the Seaboard Air Line, has been appointed superintendent of insurance, with headquarters at Norfolk, Va., and will also be in charge of fire prevention for the road.

Mr. Everton has been associated with the Seaboard since July 1, 1914, when he joined the accounting department at Portsmouth, Va., becoming inspector of fire risks in 1923. He held the latter



E. H. Everton

position until September, 1941, when he was appointed assistant superintendent of insurance, the position he held at the time of his recent appointment as superintendent of insurance.

A. S. Schroeder, assistant general solicitor of the Pennsylvania, at Philadelphia, Pa., has been promoted to assistant general counsel and Poul V. Miller, assistant solicitor, has been promoted to assistant general solicitor.

D. B. Ohrum, assistant secretary of the Texas & Pacific, with headquarters at Dallas, Tex., will become secretary on August 1, succeeding to the duties of J. J. Finegan, who will be advanced to assistant to president. Succeeding Mr. Ohrum will be H. E. Casper, chief clerk to the president.

R. H. Waterman has been appointed tax commissioner of the Texas & Pacific, International-Great Northern and the Gulf Coast Lines, with headquarters at Dallas, Tex., succeeding W. L. Holder, who has retired.

OPERATING

Joseph F. Davis, whose retirement as general superintendent of the Missouri Pacific Lines' Southern district at Little Rock, Ark., was reported in Railway Age of June 5, was born on April 25, 1878, at Brinkley, Ark. Mr. Davis entered service with the M. P. in 1903 as foreman of an extra gang, with headquarters at Little Rock. He subsequently advanced to roadmaster at Little Rock and to general roadmaster at McGehee, Ark., returning in 1920 to

There's no revenue from the coal a railroad hauls to run its own locomotives, and operating efficiency demands that every possible pound of steam be secured from such coal.

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A first step toward getting maximum value from each ton of fuel is the maintenance of a 100% brick arch in the firebox of every locomotive.

TO HOLD DOWN "TO FAD HEAD" COAL

For this purpose the power-increasing, fuel-saving advantages of Security Sectional Arches have been proved by years of service in all types of locomotive fireboxes.



HARBISON-WALKER REFRACTORIES CO. Refractories Specialists



AMERICAN ARCH CO. INC. 60 East 42nd Street, New York 17, N. Y. Locomotive Combustion Specialists

Little Rock as division engineer. He served also for two years as assistant superintendent at Little Rock before being transferred to Falls City, Neb., as superintendent of the Omaha division. In 1933 Mr. Davis returned again to Little Rock, serving successively as district engineer and superintendent until May, 1939, when he became general superintendent at Kansas City, Mo. He was transferred back to Little Rock in September, 1945, and was located at that point at the time of his retirement.

Wendell C. Allen, whose promotion to superintendent of freight transportation, Western region of the Pennsylvania, was reported in *Railway Age* of May 22, was born on June 23, 1911, at Newton, Mass., and attended the Massachusetts Institute of Technology. Mr. Allen entered the service of the Pennsylvania in 1934, serving in the signal department until June 1, 1938, when he was transferred to the Long Island. He subsequently served as foreman, telegraph and signal department, until July



Wendell C. Allen

1, 1940, when he returned to the Pennsylvania and began service in the office of the vice-president at Philadelphia, Pa. He later served in various capacities in train and engine service until May 16, 1947, when he was appointed assistant superintendent of freight transportation, with headquarters at Pittsburgh. On January 1, 1948, he was appointed trainmaster at Pittsburgh, which post he held until his recent appointment.

Chorles McDiormid, who has been appointed chief operating officer of the Georgia & Florida at Augusta, Ga., was born at Fayetteville, N. C., on August 10, 1905, and attended Johns Hopkins University, Baltimore, Md. Entering railroad service on September 1, 1924, with the Atlantic Coast Line, he served until August 1, 1925, as rodman and instrumentman. Mr. McDiarmid then became assistant engineer of the Florida Railroad & Navigation Corp. (now A.C.L.) and from January 1 to April 1, 1926, he served as assistant chief engineer, Empire State Development Company, Albany, Ga. (real

estate). From April 1 to May 15, 1926, he was assistant engineer, Jacksonville Terminal Co., then becoming instrumentman for the Florida East Coast. He was appointed field engineer, Guatemala division, United Fruit Company, at Guatemala, on December 1, 1926. Mr. McDiarmid went with the Georgia & Florida on July 15, 1927, where he served successively as draftsman, instrumentman, resident engineer, supervisor bridges and buildings, principal assistant engineer and chief engineer, holding the latter position until his recent appointment as chief operating officer.

Stewart D. Coulton, has been appointed supervisor of safety of the Wheeling & Lake Erie and the Lorain & West Virginia, with headquarters at Cleveland, Ohio.

A. L. Hunt, superintendent of the Logansport division of the Pennsylvania at Logansport, Ind., has been transferred to the St. Louis division at Terre Haute, Ind., succeeding H. D. Kruggel, who has been transferred to the Eastern division at Pittsburgh, Pa., replacing J. D. Fuchs. C. W. Whistler, Jr., superintendent of motive power at the Eastern Ohio division, with headquarters at Pittsburgh, Pa., has been appointed superintendent of the Logansport division, succeeding Mr. Hunt.

G. W. Grigg, division superintendent of the Pennsylvania at Cape Charles, Va., has been transferred to the Philadelphia division. T. M. Goodfellow, assistant superintendent of freight transportation of the Central region at Pittsburgh, Pa., has been appointed superintendent of the Delmarva division.

H. G. Connor has been appointed general safety supervisor of the Baltimore & Ohio, with headquarters at Baltimore, Md., having jurisdiction over the New York terminal and eastern regions, and the Pittsburgh and Buffalo divisions of the Central region.

J. J. Stockard, acting district superintendent of the Birmingham and Brunswick districts of the Atlantic Coast Line, has been appointed superintendent of those districts, with headquarters as before at Manchester, Ga.

Otis O. Mills, general manager of the Fruit Growers Express Company, with headquarters at Washington, D. C., has retired at his own request, effective July 1. Mr. Mills, a native of Norfolk, Va., began his railroad career in the transportation department of the Seaboard Air Line in 1903. After serving with various southeastern railroads and Armour & Co., he entered the Service of Fruit Growers Express as assistant general agent at Jacksonville, Fla., in 1920. Successive advances in that organization brought him to the position of general manager on March 1, 1927, which position he held until his retirement.

Newman J. Evans, whose appointment as superintendent of the Rochester division of the New York Central at Rochester, N. Y., was reported in Railway Age of June 5, was born at Rochester in 1888, and entered railroad service with the New York Central at Buffalo, N. Y., in 1905 as engine wiper. Serving on the Buffalo division until 1942, he held positions as timekeeper,



Newman J. Evans

assistant yardmaster at Black Rock, N. Y.; chief timekeeper, manager of the Buffalo Central terminal building, assistant station master, chief dispatcher and trainmaster. In 1942 Mr. Evans was appointed assistant superintendent of the Syracuse (N. Y.) division, which position he held until his recent promotion to superintendent of the Rochester division.

R. M. Glover, whose retirement as superintendent of the Texas & New Orleans (part of the Southern Pacific lines), with headquarters at Lafayette, La., and New Orleans, was reported in Railway Age of June 12, is a veteran of 47 years of railroad service. Mr. Glover joined the Southern Pacific in 1904 as a stenographer and timekeeper to the superintendent at Ennis, Tex., and subsequently held various clerical positions with the road. He served as supervisor of wages and inspector of transportation at Houston, Tex., from 1908 to 1917, and in the latter year was appointed assistant superintendent at Victoria, Tex. He was transferred to El Paso, Tex., in 1918, and in 1919 was advanced to superintendent of the Lafayette division, with headquarters at Lafayette. On September 1, 1937, his jurisdiction was extended to include the New Orleans terminal.

Arthur W. Conley, whose appointment as division superintendent of the Baltimore & Ohio, at Dayton, Ohio, was reported in Railway Age of May 29, was born on January 22, 1903, at Logan, W. Va. Mr. Conley began his railroad career with the B. & O. in 1922 as a yard clerk at Wheeling, W. Va. He later held successive positions as

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yardmaster, general yardmaster, assistant trainmaster and terminal trainmaster. He was appointed division trainmaster at Washington, Ind., in 1936, and in July, 1942, he was advanced to terminal superintendent at Buffalo, N. Y. In 1944 Mr. Conley became general supervisor of terminals at Baltimore, and in December of the following year he was appointed chief of yard and terminal operation—system. He was serving in the latter position at the time of his new appointment.

Frank W. Hopkins, whose promotion to terminal superintendent of the Southern Pacific Lines, with headquarters at New Orleans, La., was reported in Railway Age of June 12, was born on April 17, 1886, at Mexia, Tex. Mr. Hopkins attended grammar and high school at Temple, Tex., and in 1900 he joined the Gulf, Colorado & Santa Fe at that point as an office boy. He was employed by the S.P. in 1902, at San Antonio, Tex., and served as stenographer and assistant chief clerk there and at Houston, Tex., and New Orleans. From 1907 to 1913, he held clerical positions with the St. Louis-San Francisco at Memphis, Tenn., and Springfield, Mo., after which he engaged for some 10 years in occupations out of the railroad industry. In 1923 he rejoined the S.P. as clerk to the vice-president and general manager at New Orleans, which post he held until 1940, when he was advanced to assistant superintendent. Mr. Hopkins was holding the latter position at the time of his recent promotion.

MECHANICAL

Melvin B. Dowdy, chief mechanical inspector of the Norfolk Southern, has been appointed assistant to chief mechanical officer, with headquarters at Norfolk, Va. Mr. Dowdy was born on



Melvin B. Dowdy

January 6, 1917, in South Norfolk, Va., and began his railroad career with the Norfolk Southern in March, 1936, at which time he entered upon his apprenticeship. Upon completion of his

apprenticeship, he was assigned to the air brake department, where he remained until January 1, 1944, when he became chief mechanical inspector, which position has been abolished by the Norfolk Southern.

L. S. Crone, assistant engineer of tests of the Southern, has been promoted to engineer of tests, with headquarters as before at Alexandria, Va. C. E. Webb, assistant chief material inspector, succeeds Mr. Crane as assistant engineer of tests, with headquarters as before at Alexandria.

TRAFFIC

Joseph E. Pilon has been appointed district freight and passenger agent of the Union Pacific at Birmingham, Ala., and Doyle V. Rickson has been appointed general agent at New Orleans, La.

G. R. Nolon has been appointed general agent of the Grand Trunk Western, with headquarters at Memphis, Tenn.

G. J. Blech, whose retirement as freight traffic manager of the Southern Pacific, with headquarters at Los Angeles, Cal., was reported in Railway Age of June 19, began his career with the S.P. in 1895, serving in various traffic positions until 1901. Following a period of time during which he worked for several other roads, Mr. Blech returned to the S.P. in 1908, at Los Angeles. He subsequently held positions as industrial agent, district freight agent and assistant general freight agent, and, in 1921, was transferred to San Francisco, Cal., in the latter post. He became general freight agent at Los Angeles in 1926 and was advanced later to freight traffic manager, the post from which he has recently

William J. Lee, supervisor freight claims of the Southern at Chattanooga, Tenn., has been promoted to assistant general freight claim agent, with the same headquarters.

R. O. Fowcette, general agent of the Rutland, with headquarters at Boston, Mass., has been promoted to general western agent at Chicago, succeeding the late G. A. Doley, whose death on May 8 was reported in Railway Age of May 22, page 70.

Edward J. Cottom, general freight agent—rates and charges of the Louisville & Nashville at Louisville, Ky., has been advanced to freight traffic manager—rates and charges at that point, succeeding Ben F. Morris, whose death on June 4 was reported in Railway Age June 12. Mr. Cottom is succeeded by Philo H. Goodwyn, senior assistant general freight agent, who in turn is replaced by Joe S. Thompson, general foreign freight agent. Mr. Thompson is succeeded by Willord F. Burgess, chief clerk in the general freight office.

V. F. Frizzell, whose promotion to freight traffic manager of the Southern Pacific, with headquarters at Los Angeles, Cal., was reported in Railway Age of June 19, began his career with the S.P. in 1969 and later served as a brakeman and conductor in Arizona. Mr. Frizzell was transferred to the road's traffic department in 1923, be-



V. F. Frizzell

coming traveling agent at Tucson, Ariz. He was advanced to district freight agent at El Centro, Ca., in 1926, to district freight agent at Los Angeles, in 1928, and to assistant general freight agent at that point in 1938. He was appointed general freight agent in March, 1941, which post he held at the time of his recent advancement.

Robert C. Duffin, foreign freight traffic manager of the Missouri-Kansas-Texas, at St. Louis, Mo., has been promoted to freight traffic manager at that point, succeeding Clyde P. Bowsher, who has retired.

ENGINEERING and SIGNALING

A. O. Wolff, assistant engineer maintenance of way of the Eastern region of the Canadian Pacific, has been promoted to engineer maintenance of way of that region, with headquarters at Toronto, Ont., succeeding W. O. Cudworth, who has been granted leave of absence account of illness. J. R. Coswell, district engineer of the Algoma district at North Bay, Ont., has been appointed assistant engineer maintenance of way of the Eastern region at Toronto.

R. J. Bruce, formerly assistant engineer of the Missouri Pacific, with head-quarters at St. Louis, Mo., has been appointed assistant division engineer of the Kansas City (Mo.) terminal, succeeding Robert H. Carpenter, whose appointment as division engineer at Poplar Bluff, Mo., was reported in the Railway Age of June 12. Mr. Bruce is succeeded by W. E. Loird. J. M. Giles has been appointed assistant engineer at St Louis, succeeding G. R. Westcott, who has retired.

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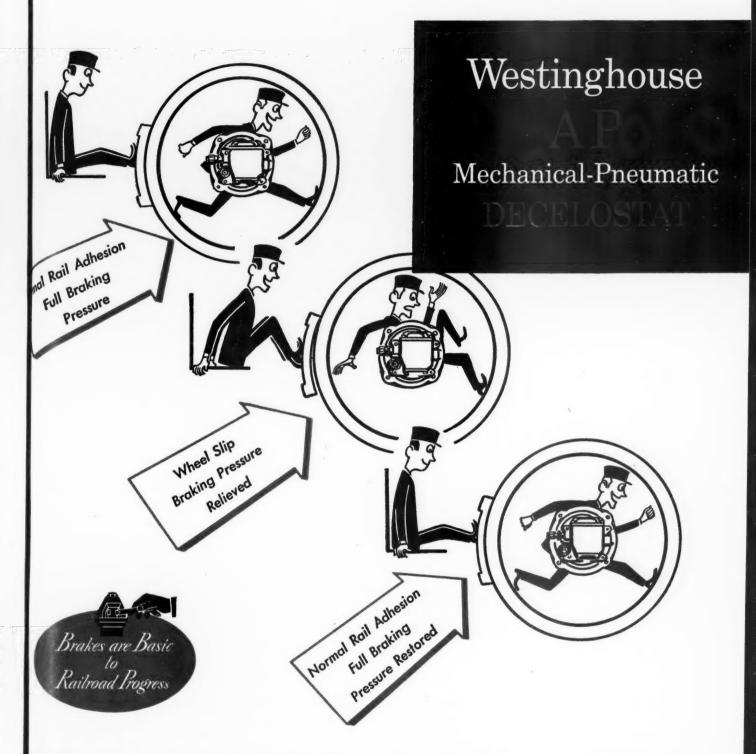
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E. P. Weatherby, signal engineer of the Texas & Pacific, with headquarters at Dallas, Tex., has retired, and is succeeded by James L. Weatherby.

Thomas W. Hays, whose appointment as general signal engineer of the Union Pacific, with headquarters at Omaha, Neb., was reported in Railway Age of June 26, was born on September 7, 1891, at Ashland, Neb. He entered railroad service with the U.P. on October 29, 1912, as an interlocking repairman at Council Bluffs, Iowa. After serving in the army from September, 1917, to February, 1919, he returned to the U.P. and held a number of positions at Omaha and Green River, Wyo., until 1922, when he was advanced to signal supervisor of the Western division, with headquarters at



Thomas W. Hays

Green River. On September 10, 1931, he was transferred to the Kansas-Central division with headquarters at Kansas City, and on December 10, 1932, to the Wyoming division with headquarters at Cheyenne, Wyo. On March 1, 1941, Mr. Hays was promoted to assistant signal engineer of the South Central and Northwestern districts, with headquarters at Salt Lake City, Utah, and five months later he was advanced to signal engineer of the same districts. He was appointed assistant general signal engineer late in 1942, which position he held at the time of his recent appointment as general signal engineer.

PURCHASES and STORES

Joseph C. Marchand, whose promotion to purchasing agent of the Western Pacific, with headquarters at San Francisco, Cal., was reported in Railway Age of June 19, was born at Plymouth, Cal., on March 26, 1894, and entered railway service with the W.P. as shipping clerk at the Portola, Cal., store in February, 1915. He held a number of minor positions at various points on the road until July, 1917, when he enlisted in the U. S. Army and served 16 months overseas with the Rainbow Division. On May 12, 1919, Mr. Marchand returned to the W.P. as an as-

sistant accountant, with headquarters at Sacramento, Cal., subsequently serving as invoice clerk, head stock clerk, chief store accountant, inspector of stores and acting chief clerk. He was



Joseph C. Marchand

promoted to chief clerk of the stores department at Sacramento on December 1, 1941, and to general storekeeper there in December, 1944. Mr. Marchand was holding the latter position at the time of his recent appointment.

SPECIAL

Richard L. Harvey, superintendent of the wage bureau of the Baltimore & Ohio at Baltimore, Md., has been promoted to manager of labor relations, with the same headquarters, succeeding Wolter G. Corl, who has retired after a 45-year career with this road. T. S. Woods, D. H. Hicks and W. A. Harris have been appointed assistant managers for labor relations.

H. L. Porterfield, Jr., assistant director of public relations of the Chesapeake & Ohio, with headquarters at Cleveland, Ohio, has resigned, effective July 1.

OBITUARY

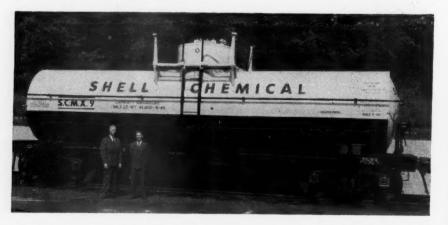
C. N. Kittle, assistant superintendent of equipment of the New York Central

lines Buffalo and East, with headquarters at New York, died on June 15. Mr. Kittle was born in 1891 at Louisville. Ky., and entered the service of the New York Central at Beech Grove as steel car mechanic in 1915. He served in that position until December, 1919, when he became inspector on new equipment being built at various plants and in 1923 he was appointed car foreman at Brightwood shops, Indianapolis, Ind. In 1927 Mr. Kittle became general car foreman at Linndale, Ohio, and in 1933 he was appointed general foreman at Ashtabula, Ohio. In 1942 he became division general car foreman at Buffalo, N. Y., for the line east and in 1945 was appointed superintendent of car shops at East Buffalo. He became assistant superintendent of equipment at New York on November 1, 1947, which position he held at the time of his death. During World War I Mr. Kittle enlisted in the U.S. Army at Louisville and served in Europe, receiving five citations for bravery in action under fire while with the Signal Corps.

Herbert Addison Taylor, who retired in October, 1946, as vice-president and general counsel of the Erie at Cleveland, Ohio, died on June 28 in a hospital in Providence, R. I., after an illness of two weeks. Mr. Taylor joined the legal staff of the Erie in 1899, following his graduation from the University of Buffalo (LL.B. 1898). He became general solicitor of the Erie at New York in 1920, and general counsel in 1931. Mr. Taylor became vice-president and general counsel at Cleveland in 1937, remaining in that position until his retirement in October, 1946.

Owen H. Nance, president of the Maryland & Pennsylvania, died on June 27 at a hospital in Baltimore, Md., of a heart ailment, at the age of 69.

Hugh W. Siddall, railroad passenger traffic authority and chairman of the Transcontinental and Western Passenger Association, at Chicago, died of a heart attack on June 27, at Las Vegas, Nev.



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Current Publications

ARTICLES IN PERIODICALS

Selling the idea of Free Enterprise, by Edward C. Bursk. Harvard Business Review, May, 1948, pps. 372-384. Published by the Graduate School of Business Administration, Harvard University. Address requests to Harvard Business Review, Gallatin House, Soldiers Field, Boston 63, Mass. Single copics, \$1.50.

Mr. Bursk discusses the problem of selling free enterprise as if it were a regular commercial product sold for profit. He says "why should not management collectively apply to the job of selling free enterprise the same down-to-earth analysis that it applies individually to the job of

selling goods or services to its paying customers? Management has the knowhow; all that is needed is to use it...." On this basis he proceeds to discuss the problem as follows: (1) The market—who makes it up and what are its characteristics? (2) The product—just what is it and how can it be adapted to the market? (3) Promotional strategy—what is the best way to present the product to the market? (4) Techniques of persuasion—how can the market be induced to buy the product?.

Pan-American Railway Congress at Habana Spurs Forward Moves, by Seymour T. R. Abt. Foreign Commerce Weekly, May 22, 1948, pp. 5-6 et seq. Available from the Government Printing Office, Washington 25, D.C. Single copies, twenty cents.

Mr. Abt reviews the history of the formation of the Pan-American Railway Congress Association, and then proceeds to discuss the most recent Congress, (the Sixth), held at Havana, Cuba, from March 27, to April 9. Three specific measures taken by the Congress are of special interest to United States railroad interests: (1) An interim committee was appointed to study and report to the next Congress on a proposed uniform system of accounts throughout the hemisphere. In this connection it should be noted that considerable attention was devoted to the subject of standardization, not only of a system of accounts but also of types of motive power and rolling stock, nomenclature, tariffs, and even of gage. (2) A resolution was passed to publish the most important papers and the revised by-laws in English. (3) An interim committee was appointed to prepare a glossary of standardized nomenclature of railway terms.

BOOKS

International Industry Yearbook; the Encyclopedia of Industrial Progress, 1948, edited by Lloyd J. Hughlett. 414 pages, illustrations. Published by Kristen-Browne Publishing Company, 551 Fifth ave., New York 17. Price, \$10.

The International Industry Yearbook is an annual publication planned to summarize the technological progress achieved in the various fields of engineering and industry. It is intended to serve management, education and the engineering profession by providing, in a single volume, the overall picture of the technical advancements throughout industry as a whole. This first issue is not designed to accomplish a deep vertical penetration into a single field, but rather to provide a broad horizontal review of significant industrial developments. There are general chapters on world industry and industrial research which are followed by 25 chapters each devoted to a different industry or subject. Subjects covered include air conditioning, refrigeration and heating, communications, electrical industry, electronics, industrial design, industrial illumination, materials handling, plastics, power industry and railroads. At the conclusion of each chapter there is an extensive list of references.

Summary Tables of the Sixtieth Annual Report on the Statistics of Railways in the United States for the Year Ended December 31, 1946. 238 pages. Prepared by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission, Washington, D. C. Available from the Government Printing Office, Washington 25, D. C. Price, \$1.

Contains complete financial and operating statistics on the railroads of the United States, and includes selected data for the Pullman Company, Railway Express Agency, electric railways, carriers by water, oil pipe lines, motor carriers, freight forwarders and private car owners subject to the Interstate Commerce Act, for the year 1946.

